NOT TO BE TAKEN AWAY

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THE DIAGNOSIS OF ACUTE ABDOMINAL CONDITIONS IN CHILDREN.*

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IT may be laid down as an axiom that the diagnosis of acute abdominal disease necessitates a mental inventory of all the numerous affections which may give rise to the particular symptoms present in the patient under examination. In many cases the symptoms afford decisive evidence of the underlying cause. Frequently they are indefinite, and a diagnosis can only be arrived at by a process of exclusion. Occasionally, accurate diagnosis depends on the *look and see* policy of an undecided surgeon or on the *wait and see* patience of a less enterprising physician. Perhaps these adjectives are undeserved, but I could easily quote many cases in justification of my meaning.

Several years ago I saw in consultation with a general practitioner and a Fellow of the College of Physicians, an eight-year-old boy who had previously had two attacks of vomiting and colic. On March the 3rd he ate plum pudding. At night he was seized with vomiting and colic, and the bowels acted. Next day there was much

* The opening address in a discussion at a meeting of the Harveian Society of London on February the 20th, 1913.

bilious vomiting. On March the 5th the family doctor was called in, as the vomiting and colic persisted, and the bowels were confined. I saw this boy four days later. His bowels had not acted; and he had vomited twice in the previous twenty-four hours, bringing up a little food and mucus on the last occasion. Examination showed a rather dry, furred tongue, pulse-rate 84, rectal temperature 99. 4°F. There was some distension of the abdomen, chiefly of the transverse and descending colon, and gurgling of wind, but no visible peristalsis. Pain was referred chiefly to the umbilicus, and there was no tenderness or local resistance. A little pale fæces were found in the rectum. The boy did not look seriously ill, although the symptoms had persisted for six days.

The main points were the vomiting, colicky pains and constipation of six days' duration. There was certainly no peritonitis. The family doctor, a man of much surgical experience, was strongly in favour of an exploratory operation, whereas I agreed with the physician that there was no evidence sufficient to justify such treatment, and that in all probability the attack was due to colic from indigestible food, though it was impossible with certainty to exclude tuberculous adhesions. Hot fomentations and castor oil, drm. ij every three hours up to four doses, were prescribed. The result was satisfactory, for after two or three doses of the oil the boy vomited some plum pudding and rapidly recovered.

It is easy to advance strong arguments in favour of the *look and see* policy. In a recent address to the Medical Society of London on the importance of immediate operation in appendicitis, Mr. Edmund Owen. ('Brit. Med. Journ.,' 1913, i, p. 321) set up a most venerable "Aunt Sally" in the guise of "an *illustrious* physician," apparently a somewhat senile and out-of-date survival of the physicians of the days of his youth and now as extinct as the dodo. His vivid word-picture of this *rara avis* does not bring to my recollection any physician with whom I have been brought in contact in recent years. Perhaps, as Mr. Owen suggests, these were not *illustrious* physicians. With admirable dexterity and in graceful phraseology he demolishes his bogey, this physician who "likes to take time in making up his mind; but whilst he is musing the fire burns."

It is not only physicians who postpone immediate operation. Sometimes the physician is more surgical than the surgeon, and the surgeon declines to explore. Not long ago I was asked to see a boy, whom a surgeon had declined to operate on for supposed appendicitis, and yet a few hours later the appendix was found gangrenous. Within a fortnight the same surgeon operated with

admirable success on another boy with appendicitis, in whose case I had advised delay a few hours before, because the symptoms were so indefinite.

A very characteristic case was that of a boy, aged 7 years, who after playing football went home on the top of an omnibus and ate an excellent tea of bloater-paste and buns. At night he was seized with abdominal pain, and vomited after a dose of pulv. rhei co. Constipation and colic persisted, and an eminent surgeon who saw him on the fourth day found a lump in the right iliac fossa. This was thought to be fæcal, and as the result of an enema that day and castor oil on the next day it disappeared. Two days later the boy was very much worse, with vomiting, abdominal pain and collapse, and when I saw him on the morning of the ninth day he was obviously moribund from general peritonitis, which in my opinion was secondary to appendicitis. He died about an hour later.

The question is essentially one of diagnosis, and such a case as the one just quoted strongly supports the practice of exploratory operation, *provided that there is sufficient evidence to warrant exploration*. It is a moot point as to who is the most trustworthy person to decide what is sufficient evidence. The surgeon claims the right, and justifies himself by occasional brilliant successes, finding a gangrenous or a perforated appendix, although the signs thereof have been most indefinite. He tries to bolster up his claim by the ill-founded assertion that physicians are unduly apt to wait and depreciate the value of surgical interference. He lightly ignores those cases in which his exploratory activity has proved unnecessary, perhaps even injurious, on the grounds that exploration is trivial in its risks. And he quite ignores the mental anxiety of the patient and relatives, the trouble and inconvenience of being laid up for a fortnight, the monetary expense, and the disorganisation of business and household management so often involved. Some of these objections do not apply to children. The modern physician may justly claim that he is the more reliable guide, for he is not biassed in favour of operation, nor is he averse from such treatment when it is necessary. And he can point to cases in which his experience would have saved the patient from a needless exploration and the surgeon's reputation from perhaps being slightly tarnished. I refer more particularly to the cases of pleurisy, pneumonia, Henoch's purpura, hæmorrhagic colitis, the gastric crises of tabes dorsalis and the onset of diabetic coma, which have been operated on because of intestinal symptoms suggestive of abdominal disease.

These arguments may be applied generally to all acute abdominal conditions. Immunity from ill-effects of exploratory operation does not warrant recourse to such a method of diagnosis, unless there is reasonable evidence of an abdominal condition which may be amenable to surgical measures. It is advisible, therefore, to cultivate the art of making a diagnosis before operating, and not to get into the less troublesome method of opening the abdomen for the sake of a visual examination in all doubtful cases.

Differential diagnosis is based on symptoms and physical signs, to which I must now draw your attention. Fortunately in children there are certain diseases, characterised by acute abdominal symptoms, which may be rapidly excluded from our consideration. Tabes dorsalis is exceptional, and it must be extremely rare for gastric crises to give rise to error. Diabetes is uncommon, yet it may happen that the onset of coma is ushered in by severe epigastric pain and vomiting, simulating perforation of the gut or appendicitis. Perforation of a gastric or simple intestinal ulcer is also exceptional, for both are rare, and less liable to perforate in children than in adults. Acute pancreatitis practically only occurs in the course of mumps. Cholecystitis and gall-stone colic are almost unknown in childhood, except that the former may occur in typhoid fever. Renal colic is infrequent and apparently not as severe as in adults. Vesical calculus is unlikely to cause misleading symptoms. Embolism or thrombosis of the mesenteric artery is a rare event, giving rise to acute abdominal pain and vomiting, with hæmorrhage into the wall of the intestine. Lead colic is not often very acute, but the association of pain and extreme constipation may be misleading.

Occasionally acute epigastric pain follows the injection of serum. Traumatism and rheumatic myalgia of the abdominal wall are uncommon causes of difficulty in diagnosis; so, too, myositis or abscess in the rectus muscle, a sequel of typhoid fever. Gastro-intestinal symptoms of a severe type may usher in rheumatic fever and are not infrequent in influenza, leading to a reasonably grounded suspicion of serious abdominal mischief, usually appendicitis. Foreign bodies and ascarides in the gut may also give rise to acute abdominal symptoms. And in the course of chronic abdominal troubles an acute exacerbation may occur, but the history of the case generally reveals the origin of the acute symptoms, *e. g.* idiopathic dilatation of the colon, tuberculous peritonitis, congenital cystic kidney and surgical kidneys. In tuberculous peritonitis difficulty may arise. Thus, a child is seized with colicky pains, severe constipation and frequent vomiting, signs suggestive of partial or

complete obstruction by bands or adhesions. In a case under my care several such bands were found and divided, but two days later the child had definite symptoms of meningitis. I believe that the abdominal symptoms were due to the onset of the meningitis and not to the abdominal state.

Acute abdominal symptoms may develop several months after operation for appendicitis. An eight-year-old boy, operated on for appendix abscess five months previously, was attacked with vomiting, collapse, abdominal pain and tenderness and fever. Next day he vomited once only and was moderately feverish. I saw him on the following day as the fever and pain continued, but there was no vomiting and the bowels had twice acted normally. The temperature was 100° F., tongue furred and moist, and the abdomen a little distended. There was no localised or generalised pain or tenderness, and nothing abnormal felt *per rectum*. The diagnosis was doubtful, but it was hoped that the attack was due to chill or influenza. Treatment by enema and castor oil failed to evacuate the bowels. Next day there was more distension, greater apathy, and a marked rise in the frequency of both pulse and respiration. No flatus was passed. On exploration in the evening there were found multiple adhesions and loculated collections of blood-stained serum. Death took place twenty-eight hours later from acute peritonitis.

Meckel's diverticulum may give rise to intestinal obstruction. Sometimes there is a history of minor attacks. The usual signs are localised meteorism and bulging, above or below the umbilicus, tenderness to the right of the umbilicus, and early fæcal vomiting. Diverticulitis closely resembles appendicitis. It causes sudden abdominal pain, perhaps vomiting, and some fever, local tenderness and muscular rigidity. But the chief acute abdominal conditions, apart from those not requiring surgical treatment, are appendicitis, intussusception, hernia and intestinal obstruction.

The *age* of the patient is of some assistance in diagnosis. Thus, atresia of various parts of the alimentary tract gives rise to symptoms in the first week of life. Those of congenital stenosis usually come on quite early. Evidence of congenital hypertrophic stenosis of the pylorus is found within the first month, generally in the second or third week, and the symptoms are of gradual development. Occasionally acute vomiting and hæmatemesis have been noted, probably due to sudden or rapid congestion of the pyloric mucosa. Two thirds of the cases of intussusception occur in the first year, and three fourths in the first two years of life. Henoch's purpura is

a disease of older children. Strangulated hernia may occur in quite young infants. Volvulus is rare in children. Appendicitis is uncommon under five years of age, but I have seen cases in the first and second year as well as at other ages.

The main symptoms and physical signs of acute abdominal disease are vomiting, abdominal pain, constipation, the condition of the abdomen, collapse, toxæmia, the abdominal facies, and the character of the pulse, respiration and body temperature.

Vomiting is a sign of many affections. In infancy it occurs with extreme ease and in children it is readily induced. An important point is that vomiting is often kept up simply by the administration of food. Hence in abdominal affections its frequency is apt to depend on whether food is given or withheld. By itself it is of little value in the diagnosis of acute abdominal disease, unless by a process of exclusion other causes can be discarded. It is frequently the first symptom of appendicitis. Vomiting may be excessive, and accompanied by profound wasting and constipation, in some cases of intracranial tumour, suggestive of chronic intestinal obstruction. It is also a striking symptom in the conditions described as acidosis, acidæmia, acetonæmia, aciduria, acetonuria or acid intoxication, recurrent vomiting, and post-anæsthetic vomiting or delayed chloroform poisoning. In acidosis the vomiting is incessant, sometimes hæmorrhagic or coffee-ground in character. Thirst, constipation or diarrhœa, and a certain degree of epigastric pain and tenderness are present. Air-hunger, restlessness and sleeplessness are noticeable. Irritability alternates with dulness and apathy. Prostration is great, emaciation rapid, and the end is ushered in with delirium and convulsions, coma or collapse. The breath smells of acetone, but there is not invariably acetonuria. Usually there is moderate fever and the abdomen is retracted.

In delayed chloroform poisoning, our knowledge of which is largely due to Dr. Leonard Guthrie, similar symptoms are present. Formerly they were ascribed to sepsis or iodoform poisoning. Such symptoms, following an abdominal operation, have also been ascribed to secondary obstruction, and the abdomen has been again opened.

Recurrent, cyclic or periodic vomiting is of somewhat the same type. Abdominal pain is absent, except such as is due to the strain of vomiting. Yet recurrent vomiting may be due to appendicitis, and a French surgeon even ascribes all such cases to this cause. This is not true.

Recurrent appendicitis presents many misleading symptoms. If you are dependent on a history of the case, it is impossible to be

certain of the diagnosis. The patient must be examined during an attack. For instance, a five-year-old girl was brought to me for attacks of vomiting, abdominal pain and fever. These attacks had occurred on and off for two years, were recurring more frequently, and lasted about a week. Nothing abnormal could be found on examination. I advised her medical attendant that they were probably due to recurrent appendicitis or periodic vomiting; and that he should see her from the onset of the next attack and examine for local evidence and for acetonuria. Shortly after, she had another attack with tenderness in the right iliac region, and a diseased appendix was removed. In taking the history of a doubtful case the following are suggestive symptoms of appendicitis: Recurrent stomach-ache, especially if associated with vomiting, diarrhœa, fever, and localised tenderness and rigidity, perhaps all over in a few hours; frequent and perhaps painful micturition during the attacks; and constant malaise with irregularity of the bowels, and periodical attacks of anorexia, colicky pains and abdominal discomfort. Such evidence, if obtainable, would be strongly in favour of an acute abdominal attack being due to gangrene or perforation of the appendix.

Abdominal pain usually takes the form of colic, and by the young is almost always referred to the navel. Young children are particularly bad at localising pain, and leading questions may result in most misleading information. The typical localisation of the pain of appendicitis is well known, but it is sometimes referred to the left side, frequently to the umbilicus, and occasionally to the epigastrium or hypogastrium. It is a more common symptom than vomiting, and is usually associated with tenderness over McBurney's spot, local resistance and rigidity of the rectus muscle. This rigidity is a sign of extreme importance. In the course of appendicitis there is sometimes a period during which the pain and discomfort are relieved, the temperature and pulse-rate fall, and the patient feels better. But the rigidity of the overlying muscle persists, and the apparent improvement is merely due to perforation or relief of tension, the patient being still more urgently in need of immediate operation.

Of the multiple causes of acute abdominal pain unsuitable or indigestible food is the most common. It gives rise to simple intestinal colic, often agonising in character, and occasionally fatal in babies from collapse. Therefore, always inquire into the details of the diet during the previous twenty-four hours, and, in the case of school-children, try and ascertain whether there has been indulgence in raw fruit, ice creams, hokey-pokey, cocoanut, etc. Intussusception

in babies is most common about Christmas, Easter and Whitsuntide, probably because of unsuitable food. In all babies remember that colic may be due to this cause. Simple colic is relieved by hot applications, pressure, vomiting, or by the evacuation of the bowels or the passage of wind. The temperature is generally below normal. Therefore, in the presence of acute abdominal pain the first point to settle is whether it is due to functional spasm or to serious organic disease.

Constipation is present in most of the conditions in which surgical interference is needed, notably in intestinal obstruction. Sometimes appendicitis is associated with diarrhœa. In intussusception a normal motion may be passed at first, the lower bowel being emptied, but after this the stools consist of blood and mucus of a most characteristic appearance. In rare instances somewhat similar stools occur in purpura and in acute colitis, with abdominal pain and tenesmus. If no tumour can be felt there is great difficulty in diagnosis and mistakes have occurred. I have had a case of intussusception referred to me as acute colitis. In case of doubt the child should be examined under an anæsthetic.

The *abdomen* is commonly distended in infants with acute abdominal affections, even in simple colic, intussusception and appendicitis. Usually it is not distended in children with appendicitis, and may not become so until a few hours after the occurrence of perforation, remaining flat and rigid, with tense recti and slight or absent respiratory movements. Or there may be no distension until inflammation causes intestinal paresis. In acute peritonitis the abdomen is rapidly distended, generally acutely painful and tender, and the patient is feverish and has the typical abdominal facies. The pneumococcal variety is often associated with foul-smelling diarrhœa. The gonococcal type is the most infrequent and perhaps at first localised.

Henoch's purpura (purpura abdominalis) deserves special notice, since cases have been operated on for supposed abdominal obstruction or intussusception, and intussusception may occur during its course.

The characteristic feature of the disease is an abdominal crisis, viz. severe colic, sometimes tenderness, vomiting, hæmatemesis and melæna. The vomit consists successively of stomach contents, greenish mucus and dark blood. Initial constipation is followed by diarrhœa, with the passage of blood and mucus, and tenesmus. The abdomen is sometimes distended, more usually retracted, hard, and tender. There is little or no fever, definite prostration, general restlessness, and perhaps enlargement of the spleen. The pain is

severe, colicky, and referred to the umbilical, epigastric or right inguinal region. It varies in severity with the amount of effusion into the intestinal wall and the degree of spasm of the gut above the effusion. Hæmorrhagic œdema of the small intestine or colon has been found. No wonder surgeons advise operation because of the probability of intussusception. Dr. G. A. Sutherland has noted that in about three fourths of all cases the tumour due to the hæmorrhagic œdema is felt in the ileo-cæcal region, just as in intussusception. Possibly angio-neurotic œdema of the intestinal wall may produce similar symptoms, apart from hæmorrhagic signs. In one case I made such a diagnosis and the child recovered. As a rule on careful examination there is found evidence of petechiæ or macular hæmorrhages in the skin, joint pain or swelling, bleeding from mucous membranes, rheumatic pains, or severe œdema. These signs may not be present at the onset. The effusion into the wall of the gut causes partial or complete obstruction, but surgical interference is not required, although there may be grave collapse, dry and brown tongue, thirst, frequent vomiting, and flexion of the legs on a hard and rigid abdomen. These cases are rarely fatal if not operated on and not complicated by secondary intussusception. Obviously the differential diagnosis from intussusception is difficult. The two conditions may be present in the same patient. Intussusception is most common in babies and is ushered in with screaming. Vomiting is a not a conspicious feature, nor is it hæmorrhagic. Pallor and lethargy may be marked, colicky pains are severe, but there is no abdominal tenderness, and a tumour is present. No bile is found on the napkins, with rare exceptions, and in this respect the stools differ from those of hæmorrhagic colitis. This sign is much less reliable in older children. These babies are usually very well nourished, and their lethargic pallor, with sometimes occasional screaming, is most noticeable.

Absence of abdominal movement during respiration is a valuable sign of acute abdominal mischief. It is most noticeable in peritonitis, the breathing being purely thoracic. Surgeons often attach great importance to this symptom. In some cases of pleurisy and pneumonia there is severe abdominal pain, perhaps located mainly in the right iliac region. At the same time the abdomen is distended and tender, does not move on respiration, and may be somewhat rigid. But the appearance of the child is not suggestive of abdominal disease, the rigidity of the abdomen is relaxed during deep inspiration, and the ratio of pulse to respiration is that of pulmonary affections. It is in the early stages, when

physical signs of intra-thoracic disease are slight or absent, that such patients run a risk of exploratory operation. It ought now to be a small risk, for attention has been frequently called to the possibility of this mistake.

The *abdominal facies*, *toxæmia* and *collapse* are all signs which may occur early in acute cases, notably those of peritonitis and perforation or gangrene of the appendix. In early stages there is often a peculiar facial appearance strongly suggestive of acute disease. It can be described rather vaguely as an anxious, slightly drawn look about the face, with a somewhat greyish pallor. It is probably due to a mixture of toxæmia and slight collapse. Toxæmia is very pronounced in some cases and trivial in others. It is a valuable symptom of appendicitis, and is often the main sign on which stress is laid in recommending operation, being frequently very definite in those cases of gangrenous appendix in which localising signs are slight or absent. Occasionally it is extreme in acute tuberculous peritonitis, but much more often so in the septic and pneumonic types. Collapse is partly a measure of the pain, and partly of the toxæmia. In babies it may be due to the pain of intussusception and simple colic. It is caused in children by sudden perforation of the appendix, and sometimes by rupture of a typhoid ulcer. The pulse, respiration, and the temperature chart afford a certain amount of more or less reliable information. Too much stress has been attached to an increasing pulse-rate as a sign of pus-formation or toxæmia in the course of appendicitis. In my opinion this is of little value, because the pulse-rate goes up so readily in children during examination, and because I do not think it necessary to wait for such evidence, even if reliable, before recommending exploration. For this latter reason I do not attach much importance to leucocytosis as a diagnostic point; the value of the pulse-rate in relationship to the rate of breathing in pneumonia has already been mentioned. Apart from this, the character of the breathing is of more assistance than its actual rate per minute. Nor is the temperature chart of very great diagnostic value. Roughly speaking, simple colic and acute obstruction are afebrile, unless there is some other coincident factor. But a low temperature is often seen in toxæmic states and in collapse due to acute pain, and there may be a sudden drop as the result of relief of tension through the bursting of an abscess or perforation of the appendix. Probably in all doubtful cases it is to the advantage of the patient that a physician should be called in to make the diagnosis, and if he is at all uncertain, the assistance of a surgeon should be requisitioned.

MITRAL DWARFISM.

By F. Parkes Weber, M.D., F.R.C.P.,
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The patient, B. L—, is a girl, aged 15 years, but her size is that of a child of ten years.* She is 50 in. (127 cm.) in height and weighs 54 lb. (24½ kgrm.). Ordinary examination and examination by Röntgen rays shows that the heart is considerably enlarged to the left; the apex-beat is in the sixth left intercostal space in the anterior axillary line. A presystolic and diastolic thrill can be felt, and a loud double mitral murmur can be heard at the apex, showing that there is mitral obstruction, accompanied by mitral incompetence, the mitral incompetence doubtless accounting for the hypertrophy of the left ventricle. There is a little crepitation at the base of the left lung behind. Röntgen-ray examination of the lungs with the fluorescent screen shows nothing special. Nothing abnormal can be felt by abdominal palpation. The teeth are fairly well formed. The nose is somewhat "saddle-shaped," but there is a history of past injury by a fall. The thyroid gland appears to be rather small. There is no pubic or axillary hair. Menstruation has not yet commenced. The urine is free from albumin and sugar. The pulse (after examination) is 100 to the minute, of moderate pressure. Blood-examination): Hæmoglobin, 80 per cent; red cells 4,400,000, and white cells 6600 to the cubic millimetre of blood. The blood-serum gives a negative Wassermann's reaction for syphilis. The cuti-reaction for tuberculosis (after von Pirquet) is negative. Mentally the child seems normal, and is employed at some light work by which she is able to earn a little money.

The history is that the child was born naturally, without instrumental aid, at full term. She learned to walk at thirteen months of age, and seemed like other children till the age of five years, There was no rickets. At five years of age she suffered from measles and congestion of the lung, and after that time was backward in her growth. Three years ago she had an attack of hæmoptysis, and her heart was said to be diseased. Three months ago she again occasionally spat some blood. She is said never to have had rheumatism. There is no other history of dwarfism or infantilism in the family, notably in regard to the patient's sisters. The mother,

* The patient was shown at the Royal Society of Medicine, Section for the Study of Disease in Children, February the 28th, 1913.

who is a "rather small" woman, aged 45 years, has had nine children (no miscarriages or abortions), of which the patient is the eighth. One (the fifth) of the nine children was born dead, and four died early. The eldest child (a married woman, aged 25 years), the sixth child (a girl, aged 19 years), and the ninth child (a girl, aged 9 years) are all living and healthy. The father, aged 44 years, is said to be healthy. Neither the father nor the mother have ever suffered from rheumatism or any severe infectious disease.

In the present case, as in most cases of mitral dwarfism, there is no history of past rheumatism. In some cases the mitral stenosis has been supposed to be of congenital origin and to have been associated with hypoplasia of the large arteries, the imperfect and limited blood-supply leading to defective growth of the whole body—a kind of anangioplastic dwarfism.* According to that theory the mitral disease is primary and leads to diminished flow of blood through the aorta and large arteries, which consequently remain small, the dwarfism of the whole body being regarded as a conservative adaptation to the defective cardiac and arterial conditions. A. Gilbert† thought that in certain cases at least (for instance, in the rare cases of familial mitral stenosis‡) the mitral stenosis and the dwarfism were both to be regarded as manifestations of an inborn tendency to faulty development. Marcel Labbé is inclined to attribute the mitral stenosis and the general dystrophy in such cases to a tuberculous or syphilitic taint.§

In the present case there is absolutely no evidence of the presence of syphilis or tuberculosis, and I have hardly a doubt that the cardiac disease is of rheumatic origin, although there is no history of the child ever having had rheumatism. But rheumatism in young children is not rarely overlooked or mistaken. The dwarfism in this case I regard, indeed, as a sign, not of the congenital origin of the mitral disease, nor of the presence of a tuberculous or inherited syphilitic taint, but as a sign that the mitral disease commenced at a relatively early period of extra-uterine life, long

* Infantilism of Lorain's type was, I think, regarded by E. Brissaud as an "infantilisme anangioplasique" resulting from the action of a chronic congenital or acquired disease during the period of bodily growth and development.

† A. Gilbert, 'Gaz. méd. de Paris,' 1884, lv, p. 198. See also A. Gilbert and F. Rathery, "Le Nanisme Mitral," 'Presse Méd.,' Paris, 1900, viii, pp. 225, 231.

‡ Cochez, "Le Rétrécissement mitral pur, congénital, familial, et héréditaire," 'Bull. méd.,' Paris, 1898, xii, p. 493.

§ Marcel Labbé, "Rétrécissement mitral pur et nanisme," 'Presse méd.,' Paris, 1908, xvi, p. 497. See also Labbé, Rosenthal and Marcorelles, "Rétrécissement mitral pur avec nanisme," 'Bull. et Mém. de la Soc. Méd. des Hôp. de Paris,' 3me sér., 1908, xxv, p. 636.

before the period of maximum normal development. Of the mitral obstruction and the mitral incompetence I consider the former to be the more important factor in the ætiology of the dwarfism. This dwarfism I think may be best explained as the expression of a conservative adaptation or conservative hypoplasia of the whole body—Nature's attempt to limit the growth of the patient in accordance with the limited arterial blood-supply. Such a *conservative hypoplasia* is to be contrasted with the better-known conservative vital process known as *compensatory hyperplasia,* which is illustrated in the present case by the hypertrophic enlargement of the left ventricle to make up for the regurgitation of blood through the leaky mitral valve.

In conclusion it should be mentioned that "mitral dwarfism" (the "nanisme mitral" of French authors) is only one variety (probably the best known) of a group of "cardiac dwarfisms." The dwarfism in all these cardiac cases is a partial infantilism. Therefore the terms "mitral infantilism" and "cardiac infantilism" may be employed if preferred.

SUMMER HEAT AND SUMMER DIARRHŒA.*

By Hector Charles Cameron, M.D., M.R.C.P.,
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I feel that perhaps I ought to apologise for bringing to your notice so well-worn a subject. I should have felt perfectly content to have left the subject still undiscussed if it had not been that the Epidemiological Section had held very frequent debates upon this very topic. The result has been, I think, that the subject has recently been dealt with too exclusively from a single point of view—that of the epidemiologist. I believe that the carefully argued papers contributed to that Section by Niven, Dudfield and others have had a very great effect in influencing current opinion on the subject, and that as a result all factors in the ætiology of summer diarrhœa other than microbial contamination have been too much neglected. All of these papers start with the assumption that the symptom diarrhœa may be taken as constituting a specific disorder capable of being

* A paper read before the Section for the Study of Disease in Children of the Royal Society of Medicine on February the 28th, 1913.

subjected to a mathematical analysis. Dr. Dudfield, for example, opens his paper read on Feburary the 23rd of last year with the following words: "I do not propose to take up any time in discussing what is meant by the term infantile diarrhœa as I assume that we are all thinking of the same clinical picture." It is because I believe that in dealing with the statistics of infants dying of diarrhœa it is quite impossible to make any such assumption that I have brought the subject before the notice of this Section. Into the total of deaths from diarrhœa among infants in the third quarter of any year I believe a vast variety of disorders is crowded. Many of the cases have been seen under conditions which render an accurate diagnosis unlikely: not a few have received no medical attention at all. Because in infancy one function alone is highly developed—that of absorbing food—disease of whatever nature is apt to show itself with symptoms of alimentary disturbance, and as a result diarrhœa is the common accompaniment of disorders of the most varied nature. It is not my purpose to deny that acute infective enteritis undergoes exacerbation during hot weather or that increased decomposition of milk plays an important part in the production of alimentary disorders. I do contend, however, that even if it were possible to secure a faultless supply of milk we should still witness an enormous rise in the frequency of the symptom of diarrhœa during hot weather.

That the clinical diagnosis between infective and non-infective diarrhœa in the majority of cases is one of great difficulty is generally admitted. Certainly severe and even fatal symptoms, usually regarded as characteristic of so-called summer diarrhœa, may supervene upon an attack of dyspepsia. The products of fermentation of food in the intestine which serve to provoke excessive peristalsis have also a deleterious effect upon the epithelial lining of the alimentary canal, so that their long-continued action or extreme concentration may ultimately lead to the most profound intoxication. With the loss of selective control by the cells lining the alimentary canal and with the subsequent degeneration of the liver-cells the usual symptoms of intoxication, characteristic of summer diarrhœa, appear—high pyrexia, partial coma, immobility of the limbs, unnatural posture, albuminuria, alimentary glycosuria, and irregular, disordered breathing. I believe that it is possible to recognise all stages between a simple dyspepsia and a fatal food intoxication, and that we should protest against the tendency to regard all fatal cases of diarrhœa in the summer as infective in origin.

It may assist in making my meaning clear if I tabulate the possible relations which may exist between the height of the

thermometer and the amount of diarrhœa prevalent in infants and endeavour to assess the part played by each.

(1) The increase in diarrhœa may be due to the *direct* effect of heat upon the infant.

(2) The increase may be due to the *indirect* effect of heat by lowering the tolerance of food, and by increasing the danger of over-feeding in an infant rendered thirsty by the loss of fluid which diarrhœa, vomiting and excessive perspiration entails.

(3) Heat may exert an *indirect* effect by lowering the immunity of the child to infections of all sorts, both of the alimentary tract and elsewhere, and it may indirectly swell the total mortality by aggravating the course of all alimentary and infectious disorders of whatever nature.

(4) Heat may exert an *indirect* effect by favouring the growth and multiplication of micro-organisms outside the body, or by promoting a favourable means for the transport of these organisms, by the multiplication of flies or by the spread of dust.

It is because I think that recent writings have dealt too exclusively with this last supposition that I have ventured to ask that some greater emphasis should be laid upon the others.

(1) The view that the increase of diarrhœa is in great part the direct result of heat is supported by a variety of considerations. It is well known that the power of the infant, and especially of the weakly infant, to maintain a constant temperature is ill-developed. Although the necessity of preventing an excessive loss of heat is insisted upon by all writers upon infant feeding, less stress is laid upon the importance of avoiding the overheating of the child. Yet summer diarrhœa in its most severe forms is almost confined to those of very tender years. Among the occupants of crowded courts and tenements again and again only one member of the community is affected—the infant under one year of age. With the attainment of a higher degree of adaptation between heat-loss and heat-formation, the older children tend more and more to escape. In estimating the direct effect of heat upon the sensitive organism of the child, it is to be remembered that we have to take into account not the temperature of the outer air, much less the temperature of the four-foot earth thermometer, but the temperature of the stifling room in which the infant is confined. Where rooms are small and ill-ventilated, where from lack of windows or in back-to-back houses there is no through draught brought about by the difference of temperature between the back and front of the house owing to the position of the sun, where the percentage of moisture in the air is

high, either from overcrowding or from cooking or washing of clothes, observation shows that diarrhœa is unusually common. Again, many records have shown that in times of great heat the temperature of even healthy infants is raised, while their average gain in weight is reduced. Both of these symptoms occur with considerable constancy during hot weather even in cases which are still quite free from symptoms of diarrhœa and vomiting, and they may be regarded as prodromal symptoms sometimes preceding an attack of diarrhœa by a long interval and culminating in the attack. For example, Schloss, who has lately studied the question in Berlin, recorded the average daily gain in weight of infants who were free from diarrhœa in two of his wards, with the following result:

	May and June. Before the heat.	July and August. During the heat.	Sept. and Oct. After the heat.
First ward	17·5	10·0	14·0
Second ward	16·0	10·0	18·0

Lastly, the close correspondence between the temperature curve and the curve of the total deaths from diarrhœa is itself an argument in favour of the view that the effect of heat is immediate and not mediate. Wherever slum buildings and overcrowding exist the two curves keep pace alike in rise and fall. In this connection the observations of Finkelstein, Willim Liefmann and Lindemann and others upon the correspondence of the daily temperature with the daily total of cases are interesting, for the relation then becomes even more marked than in the usual figures in which the unit of time is a week. If each case arises by infection and is propagated by infection, we should expect that the epidemic when once established under favourable circumstances would sometimes of its own momentum break beyond the bounds set to it by the temperature curve, and that its decline, if occasioned by exhaustion of infective material, would not always coincide with the fall in the thermometer.

(2) We must consider that in times of great heat and of great humidity, on the ordinary ratio of food, the production of heat may be so great that pathological effects are produced. In adults the consumption of food under such circumstances is instinctively lowered. While less is eaten more is drunk to make good the loss of fluid from increased perspiration. In infants the difficulty is greater because the infant's food and drink are bound up in one and the same fluid. No doubt the infant fed at the breast attains the same object though in a different way. The provisions against overfeeding in the breast-fed infant are very effective. When the child

ails, the diminished suction soon interferes with the free flow of milk, and it requires some days of vigorous convalescence before it is again established. Moreover, when the breast is insufficiently emptied the last milk is not obtained, so that the percentage of solids, and especially of fats, falls. No doubt, too, the alteration in the mother's diet, the greater intake of fluid and the decrease in the amount of solid matter reacts to some extent upon the milk and produces a fluid of less concentration. In the bottle-fed none of these safeguards are present, and the thirsty child if left to itself is more apt to suck an excess from a bottle, which offers no fine adjustment of amount and composition from day to day in accordance with the needs of the child.

Salle has studied the question experimentally in puppies. Prolonged exposure to heat produced a rapid loss of weight, diarrhœa, vomiting, and a rise of temperature. When a diverticulum of the stomach was made in the manner suggested by Pawlow the gastric juice was diminished both in amount and in digestive power while the hydrochloric acid secretion decreased. Such a failure of digestive power must give rise to increased fermentative changes in the carbohydrate constituents of the food with consequent stasis and diminution of gastric peristalsis. Dyspepsia so produced, while common enough during a spell of hot weather even among healthy infants, becomes almost the rule among the neglected artificially fed children of the poor, living in the hot, close, stagnant atmosphere of the slums of cities.

(3) Heat may exert an indirect effect by lowering immunity to infections of all sorts. I know of few statistics which deal with the relative frequency in summer heat and winter cold of infections other than those of the alimentary tract. It must be common experience how frequently bronchitis and broncho-pneumonia are associated with severe attacks of diarrhœa in the summer. Furunculosis and subcutaneous abscesses appear to be much more common in hot weather. Among the infants in his clinique, Meyer reports a rise from 15 per cent. of total cases to 41 per cent. in the former and from 6 per cent. to 30 per cent. in the latter. The effect of exposure to fresh air, wind and cold in increasing immunity and of the reverse conditions in lowering it is too wide a subject to be considered in a few words. "Evidence," says Pembrey in this connection, "steadily accumulates to show that the bad effects of over-crowded rooms are due, not to diminished oxygen, not to an increase of carbon dioxide, not to any toxic discharge from the human body, but to the absence of free ventilation, to the warm and humid atmosphere, which reduces the

respiratory exchange and metabolism of the inmates, and renders them less resistant to the attacks of micro-organisms." No doubt alimentary infections share in the common increase, but of the cases which go to swell the total deaths from diarrhœa during the summer in very many the diarrhœa and vomiting are symptomatic of other disorders.

(4) There remains the supposition that heat is prejudicial because of the increased bacterial content and increased decomposition of milk. If I have laid emphasis on the part played by other factors than the contamination and decomposition of milk, it is not because I wish to underrate the importance of a pure supply of milk. I believe, however, for the reasons I have given, that even if we could ensure a perfect supply of milk, we should still witness during hot weather a rise in the mortality from diarrhœa little less than that to which we are now accustomed. If the cause of summer diarrhœa is to be found in the multiplication of bacteria in the milk, then some explanation must be found for the frequency with which infants fed at the breast are attacked, and for the high mortality among infants fed upon condensed milks and patent foods, in which the bacterial content is relatively low. Moreover, it is to be remembered that the organisms which occur in milk are usually of a harmless character, and that butter-milk has even proved itself of some value in infant feeding. No doubt the organisms in milk sometimes include others less innocent in character, yet a vast amount of bacteriological work has not succeeded in establishing a causal connection between any one organism and so-called epidemic diarrhœa.

In conclusion I may put forward for acceptance or criticism the following propositions :

That neither direct over-heating of the child, nor disturbances of digestion, nor intercurrent infective disorders, nor direct infection of the alimentary tract is sufficient of itself to explain the rise in the mortality from diarrhœa in the summer, but that in that rise each plays a part ; that of all the deaths registered as due to diarrhœa in the summer a small fraction only is due to bacterial infection of the alimentary tract ; and that the progress of knowledge with regard to the prevention and treatment of diarrhœa has been not a little hindered by regarding the problem from a standpoint too purely epidemiological.

If so much is granted it follows that greater emphasis should be laid upon such prophylactic measures as the supply of an adequate quantity of water for the child during hot weather, the reduction of the carbohydrate percentage in the food, the use of cooling baths

and of light and porous clothing, and the proper ventilation of rooms, courts and alleys. New York, which suffers so profoundly from the disease, has taught us a lesson in the provision of rapid means of transport of over-heated infants to the fresh and moving air of the sea coast.

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DIPHTHERIA OF THE STOMACH, WITH A NOTE ON DIPHTHERIAL ONYCHIA.

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My excuse for this note is the interest caused by a specimen of diphtheria of the stomach which I showed to the Pathological Society of Manchester on January 18th, 1911, and the desire since expressed that I should make the record of the case more readily available. I take the opportunity also of mentioning very briefly a case of diphtherial onychia.

The references in the literature to diphtheria of the stomach are very few. But after consideration of what cases there are on record, and taking one's own experience into account, one arrives at the conclusion that the condition is commoner than appears from the literature; in only a small proportion of the fatal cases of diphtheria is an autopsy performed and even when a post-mortem examination is made, the alimentary canal is not always opened up if no symptoms connected with it have been noted.

In the New Sydenham Society's translation of Ewald's 'Lectures

on Diseases of the Stomach,' 1892, we find a reference to the inaugural dissertation of Kalmus in 1888, where he found gastric diphtheria in 6·5 per cent. of his 199 cases. According to him the seat of the ulceration is generally at the cardia, and the stomach cavity is involved by extension in streaks. In other cases isolated sloughs are found, especially in the fundus, reddish or brownish in colour, with reddened areolæ, or membranes formed of fibrin, mucus and desquamated glandular epithelium. The upper layers of the mucosa slough, the membranes separate and fatal hæmorrhage may result. Kalmus found numerous bacilli in the slough and necrotic tissue, and not only here, but in the underlying healthy tissue and even in the submucosa.

Smirnow, in 'Virchow's Archiv,' describes two such forms of disease. He says the tissues throughout were free from organisms. In one of his cases there was a fibrinous inflammation, without destruction of the secreting epithelium, in the other the mucosa itself became affected by a necrobiotic process, and underwent what von Recklinghausen described as hyaline degeneration of the cellular elements.

In 1901 Councilmann, Mallory and Pearce published in Boston a record of the bacteriology and pathology of 220 fatal cases of diphtheria, and amongst these they found five cases of diphtheria of the stomach. A fibrinous membrane, hæmorrhagic beneath, was present in all cases. In one case the membrane extended to the duodenum. They found extensive degenerative changes in the glands of the stomach, not limited to the places underlying the membrane. The intestine itself showed swelling and hyperæmia of Peyer's patches and of the solitary follicles, but otherwise nothing abnormal was detected.

W. P. Northrup, in the volume on "Diphtheria, Scarlet Fever and Measles" of 'Nothnagel's Encylopædia,' published in 1902, mentions that during a recent epidemic of measles at the New York Foundling Hospital two cases of diphtheria of the stomach were found at autopsy. Mallory, writing in 1908 on the pathology of diphtheria, says that with the exception of the formation of membrane which sometimes occurs in the œsophagus and stomach the lesions of the gastro-intestinal tract are relatively unimportant. Lymphoid hyperplasia is seen, with changes in the spleen and lymph-glands. The slight extent of the lesions indicates that the source of the toxins is the blood and not the alimentary canal. There is nothing to indicate that the toxins are eliminated by the alimentary canal.

In 1895 Courmont, Doyon and Paviot published some records of

experiments in which they had injected cultures of diphtheria bacilli into the blood-stream of dogs, and found lesions of the small intestine varying from a simple vasomotor dilation, with or without diapedesis, to a true cellular exudation, constituting a true membranous enteritis. The lesions found were proportional to the doses given. These authors believe that diphtherial toxins are eliminated by the intestines. Peyer's patches showed evidence of degeneration. Councilmann, Mallory and Pearce discuss this theory but do not accept it, regarding the intestinal lesions as the result of toxins

Fig. 1.

circulating in the blood-stream, but as no proof of the elimination of toxins by this route.

The specimen of which Fig. 1 is a photograph is the stomach of a male child, aged 3 years. I first saw him on the fifth day of a very severe attack of diphtheria, and up to this time he had been given no antitoxin. I found him with a subnormal temperature and very toxic in appearance; there was false membrane covering the posterior pharyngeal wall, tonsils, uvula, the whole of the soft palate, and extending forwards on the hard palate almost up to the teeth. Considering the extent of the membrane and the duration of the disease without any antitoxin treatment, the case was of course hopeless from the first, but in order to give him any possible chance

I injected 8000 units of antitoxin at once into the left median basilic vein, following this the next morning by a similar injection into the right median basilic. In the forty-eight hours after this I gave him three more injections of a similar amount of antitoxin subcutaneously. However, as expected, he died of toxæmia on the tenth day of the attack, having vomited blood the day before and having developed scattered petechiæ about the body, both not uncommon signs in toxic diphtheria.

The post-mortem examination, made the same night, showed nothing unusual for this type of case except the stomach, shown in

FIG. 2.

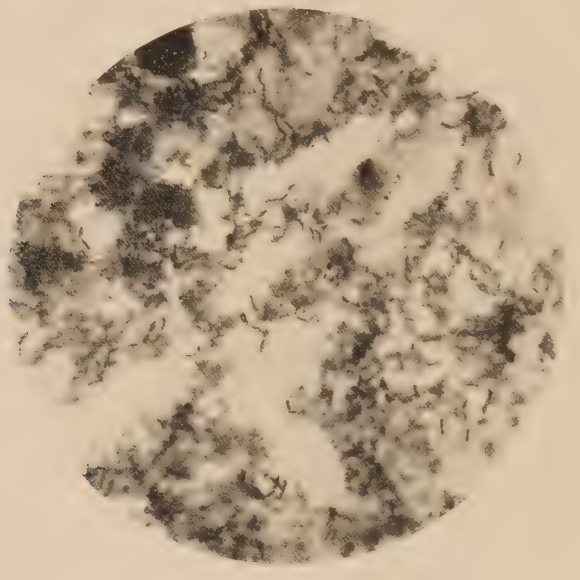
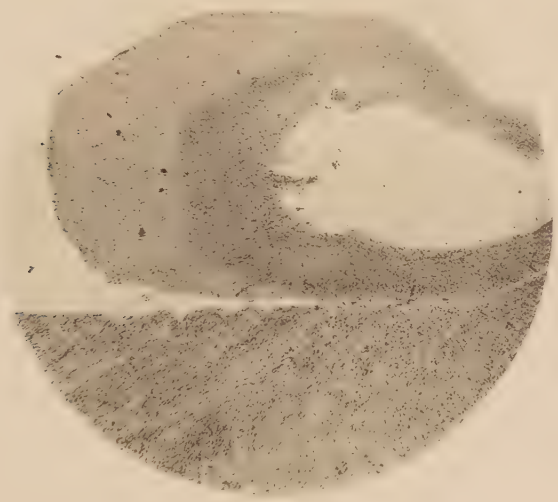


Fig. 1. The mesenteric glands were deeply injected; there was toxic myocarditis; the left ventricle contained adherent fibrinous clot; the superior longitudinal vein contained a thrombus; the bulk of the blood was in the abdominal cavity—all of these the usual post-mortem findings for the class of case.

On opening the stomach a false membrane was seen covering its entire surface. Of this some had become detached prior to the taking of the photograph reproduced in Fig. 1, but enough remains to indicate the condition quite clearly. It was loosening in places, but none had separated at the time of the examination. It was definitely limited to the boundaries of the stomach, and did not extend into the œsophagus, nor yet into the duodenum. Smear prepara-

tions were made at the time from fragments of the false membrane and typical clumps of Klebs-Lœffler bacilli were easily found. Fig. 2 is a high-power microphotograph of a piece of the detached membrane and shows the bacilli plainly. In Fig. 3, a photograph of a section of the stomach-wall, the false membrane is seen to be well developed, and beginning to become detached. At the time of the post-mortem examination considerable swelling of the mucosa was evident, and on stripping off the membrane in places the hæmorrhagic injected state of the mucosa was very marked. Fig. 3 shows the leucocytic infiltration of the mucosa and the swelling of the

Fig. 3.



glandular epithelium. I regard this case as true diphtheria of the stomach, or *diphtherial* gastritis, and not, as some of the recorded cases are, merely a membranous or *diphtheritic* gastritis, due to circulation of the diphtherial toxins in the blood-stream. In these cases there is definite necrosis of the mucosa. In Fig. 3 it will be seen in my case that where the false membrane has become detached there is a practically intact mucosa, while Fig. 2 proves that we had to do with a definite false membrane containing diphtheria bacilli.

Diphtherial Onychia.

Some years ago, when I was resident in a fever hospital, one of

my medical colleagues was troubled for some time with a very localised onychia at the side of one of his finger-nails. In spite of antiseptic and cauterising treatment extending over some weeks it refused to heal. He looked toxic and complained of feeling run down, but had no temperature, and very slight glandular enlargement. At this stage I made some films of the thin scanty discharge from the side of the nail, and obtained in these and also from cultures pure preparations of Klebs-Lœffler bacilli. A 4000 unit dose of antitoxin was now given, and in about five days the local condition had healed, while he rapidly regained his strength, no paralysis following.

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Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Friday, March the 28th, 1913.

Dr. J. Walter Carr, *Vice-President, in the Chair.*

A Case of Tremor (? Congenital).—Dr. Frederick Langmead.—The patient, a girl, aged 10 years, had definite tremor of both upper limbs, moderate in amplitude. It interfered somewhat with school work, but otherwise caused no discomfort. It had been noticed particularly during the last two

or three years, but probably dated from infancy. There were no signs of organic nervous disease.

A Case of "Nervous Cretinism."—Dr. LANGMEAD.—The patient, a boy, aged 10 years, was an undersized and mentally deficient child who first attended the Hospital for Sick Children, Great Ormond Street, when $7\frac{1}{2}$ years old, and then exhibited the usual signs of cretinism to a moderate degree. He could not sit alone, stand, or talk, and was "dirty in his habits." His appearance was characteristic. Under thyroid treatment he had improved considerably in his general condition, and could walk, although badly, and became clean in his habits. His vocabulary was still very limited and pronunciation imperfect, only a few simple words being used and these in a monotone. He had lost most of the aspect of cretinism. The feature of special interest was a co-existing cerebral diplegia affecting chiefly the legs. These were stiff, adducted, and their deep reflexes were exaggerated. The plantar response was sometimes definitely extensor. The arms were little, if at all, affected; the triceps jerks were brisk and (?) slight rigidity was present. He stood in the knock-kneed position, with feet abducted, and walked with adducted legs, but without scissor-leg progression. The thyroid could not be felt. Dr. Langmead said that he had called the case "nervous cretinism" after Major Robert McCarrison, I.M.S., who had described the association of cretinism with spastic paralysis in his study of endemic cretinism in the valleys of Chitral and Gilgit in India. That writer regarded the paralysis as part of thyroidal inadequacy, and had obtained some success with thyroid therapy in such cases.

A Case of Defective Ossification of the Skull in a Boy.—Dr. LANGMEAD.—There was marked pulsation over the posterior end of the interparietal suture. This was apparently cerebral in origin and transmitted through a small foramen.

A Case of Congenital Thoracic Deformity.—Dr. F. G. CROOKSHANK and Mr. SIDNEY A. BOYD.—The patient, a boy, aged $6\frac{1}{2}$ years, was the subject of congenital thoracic deformity affecting the right side. There was a large depression in the upper part of the front of the chest, and an oval gap could be made out in the bony parietes, measuring four inches in its long diameter (which passed obliquely downwards and forwards from the axilla) and three inches transversely. The defect was apparently due to absence of the anterior portions of the second, third and fourth ribs. The fourth rib appeared to join the fifth. The sternum was asymmetrical, and the right upper costal cartilages, which were attached to the sternum, were bent backwards. There was a marked hernia of the right lung. The clavicle and scapula were smaller on the right side than on the left. There was scoliosis of the dorsal vertebræ, convex to the right. The pectoralis major was fairly well developed, but was not so large as on the left. The pectoralis minor and the upper part of the serratus magnus were apparently absent. There was some depression of the corresponding area of the left side of the chest, but no bony defect. The condition appeared to fall within the category described by Dr. J. Thomson in 'Teratologia' (January, 1895) as "congenital thoracic deformity." As in Dr. Thomson's cases, if the arm were flexed at the elbow and the hand placed on the front of the opposite shoulder, the deformed area was found to be almost exactly covered by the upper arm. So far, then, Dr. Thomson's suggestion, that this kind of deformity was due to intra-uterine malposition, was supported.

A Case of Achondroplasia.—Mr. A. S. Blundell Bankart.—The patient was a girl, aged 7 years. The parents were first cousins. The condition was first noticed in infancy. The child had been treated for rickets when sixteen months old, and the treatment had been continued for three years without effect. She was stunted in growth. The head was normal, not rickety. The teeth were good, dentition not being delayed. The chest was narrow, the sternum being prominent (pigeon-breasted). Very slight beading of the ribs was present, and a well-marked horizontal sulcus traversed the lower part of the chest. Lordosis existed. Upper extremities: great enlargement of epiphyses; skiagrams showed marked irregularity and "cupping" of epiphysial lines; diaphyses stunted. Extreme laxity of wrist-joints was present, yet she had a good grip and could use the hands well. There was looseness of the elbows; the head of the radius on each side could be dislocated and replaced with ease. The lower limbs were very slightly affected, the epiphyses being hardly, if at all, enlarged; the diaphyses were not stunted. There was slight genu valgum, which had improved by treatment.

A Case of Circumscribed Serous Meningitis.—Mr. Lionel E. C. Norbury.—The patient was a male chid, aged 13 months, admitted to the Belgrave Hospital on August the 6th, 1912. There was a history of convulsions fifteen days previously, followed by right facial paresis and tremor of the right hand. No history of trauma was obtained. An abscess on the left side of the neck had been incised two months before admission, and discharge from the right ear occurred at the same time. On admission he was seen to be a well-nourished but very pale child. There was a fine, regular tremor affecting the right arm and hand, right leg, right side of mouth, and also the tongue and lower jaw. Right facial paresis and slight convergent strabismus were present. The knee-jerks were present and equal, not exaggerated. The abdominal reflexes were present. Lumbar puncture failed to withdraw fluid. No changes were seen in either fundus oculi. At an operation the left parietal bone was trephined over the centre of the Rolandic area, and the opening in the bone enlarged so as to freely expose this area. The dura was incised crucially and the pia-arachnoid found to be very swollen and œdematous. The pulsation was feeble. The tremor gradually disappeared, first from the leg and then from the arm and face. The wound healed by first intention. Cerebro-spinal fluid collected under the scalp-flap, and was evacuated every few days (five times in all) until it ceased. Nine days after the operation there was no sign of tremor. The patient was seen on March the 20th, 1913, when the general condition was found to be very good. A very slight facial weakness remained. In the region of the craniotomy wound there was a moderate degree of bulging.

Acute Poliomyelitis affecting the Muscles of Both Hands.—Dr. R. C. Jewesbury.—A girl, aged 12 years, had an attack of "influenza" six months ago, being very feverish for two days; she then became very weak in the right arm, and to a less extent in her back and right leg. She showed marked wasting of the muscles of both hands, and also wasting of the muscles of the right arm and shoulder. The triceps was the muscle most affected in the arm.

Congenital Eversion of the Great Toes and other Abnormalities.—Dr. F. Parkes Weber.—The patient was a healthy-looking female baby

aged 7½ months. Both great toes were everted and overlapped by the other toes, and the deformity thus produced suggested at first sight the eversion of the great toes not rarely met with in elderly persons, often associated with ulnar deflexion of the fingers, and often wrongly ascribed to the wearing of badly shaped boots or shoes. Both the child's thumbs were turned inwards across the palms, and there was also an abnormal projection on the left side of the neck. The patient, who seemed otherwise quite normal, was the only child of healthy parents, both young. There was no history of any similar malformation in any other members of either the mother's or the father's family, nor was there any definite history of "maternal impression."

Sections from a Case of Progressive Muscular Atrophy (Werdnig-Hoffmann Type) in a boy, aged 3 years.—Dr. Leonard G. Parsons.—The child had been normal until aged ten months, when progressive wasting began. This was first observed in the shoulder muscles and the upper part of the thigh. Ability to hold the head erect was lost in the third year. On admission to hospital the cranial nerves were normal. There was almost complete flaccid paralysis of the shoulder-girdle muscles, double wrist-drop, and supination was impossible. Movements of the fingers were possible but feeble. The lower limbs showed wasting, chiefly above the knees, and contractures, the only movements possible being flexion and extension of the ankles and toes. The abdominal and intercostal muscles were paralysed. He was unable to sit up alone or hold the head erect. Scoliosis was present in the lower dorsal and lumbar regions. Knee, ankle and arm-jerks, and abdominal reflexes were absent. There was no sensory change. The cerebro-spinal fluid was normal. There were marked diminution of electrical excitability and slight reactions of degeneration. Death was due to broncho-pneumonia. Necropsy: Subcutaneous fat was present in fair amount and masked some of the muscular atrophy. The affected muscles were very pale and atrophic, the diaphragm by contrast being a good colour. The muscles showed fibrosis. Some of the muscle-fibres were larger than normal and had a rounded contour; the majority of the altered fibres were smaller than normal (0·01 mm. and less), and some were on the point of complete atrophy. The small fibres showed an enormous increase in the number of nuclei. Striation was well preserved and muscle spindles were normal. Many fibres showed fatty degeneration. The anterior nerve-roots were smaller than normal and showed overgrowth of fibrous tissue. Nissl sections of the cord showed a striking diminution in the number of cells in the anterior horn, about one third the normal number being present. The cells were also smaller than normal and their processes less marked. Some showed a degree of chromatolysis. Marchi sections showed no change.

Diffuse Sarcomatosis of the Brain and Spinal Cord.—Dr. Parsons.—The specimens were from a child aged 2 years. Symptoms started four months before death. The initial symptoms were headache and violent screaming attacks with gradually failing vision, and at the end of three months the child was blind. Walking was normal until fourteen days before death. Hearing, speech and intelligence were normal until the onset of the final pressure signs, which commenced ten days before death. Post mortem the cord was found to be ensheathed throughout its length by growth, which also invaded its posterior aspect. The growth extended on to the nerve-roots and there were many growths on the cauda equina. It extended outside the spinal canal along the root of the lumbar plexus. The Gasserian ganglion

and the ganglia of the ninth and tenth cranial nerves were much enlarged, and the seventh and eighth nerves were thickened by an extension of the growth. Multiple small growths were present over the base of the brain arising from the pia arachnoid. Hydrocephalus was marked. The primary growth was in the cerebellum, and had invaded, distended, and completely filled the fourth ventricle; it had also blocked the iter, and then was continued as a filmy gelatinous covering over the ependyma of the third ventricle. Microscopically, the growth was a mixed-celled (chiefly small-celled) sarcoma, and its method of spread was due to "infection" of the cerebro-spinal fluid.

Hair-ball removed from the Stomach of a Child.—Mr. Seymour G. Barling.—The specimen consisted of a felted mass of hair and string, and presented an exact cast of the stomach, showing the pyloric canal, pyloric antrum, and fundus. It was removed from a girl, aged 7 years, of normal intelligence, who for some days before operation had suffered from pain in the upper abdomen and vomiting. On examination a tumour exactly resembling the shape of the stomach presented itself in the epigastrium and moved up and down on respiration. The shape of the tumour, together with a history of hair-biting extending over several years, and the occasional passage of string, tape, etc., in the motions, led to a direct diagnosis by Lieutenant J. L. Ritchie, R.A.M C., by whom the case was first seen. On gastrotomy being performed the specimen was easily removed, and the patient made a satisfactory recovery.

SECTION OF OPHTHALMOLOGY.

March the 5th, 1913.

Precocious Development in a Boy.—Dr. F. J. Poynton.—Dr. Poynton has had this patient under his observation since he was aged $2\frac{1}{2}$. He is now aged 8 years, and the entire absence of any evidence of suprarenal tumour and the boy's facies led him to show the case for diagnosis. The first child of healthy but small parents. He was healthy except for a "feverish cold" in the first year. After this he began to grow very fast. Sexual development and pubic hairs were developed at one year. At the age of 2 years 6 months his weight was 3 st. 1 lb.; circumference of head, 20 in.; thorax, $22\frac{1}{2}$ in.; abdomen, 23 in.; height, 3 ft. 5 in. At the age of 3 years 4 months his weight was 3 st. $13\frac{3}{4}$ lb.; his height, 3 ft. 8 in. He had a deep voice, was emotional, but had shown no sexual propensities. The ossification of his carpus corresponded to a boy aged thirteen.

Since that time this remarkable development has hardly kept pace with the earlier years, but the boy has now a well-marked moustache and a downy beard and whiskers. His frame is almost paternal in its back view, both in breadth and depth. His legs are not in accord with the upper part of his frame, but are comparatively small. He is a quiet, modest boy, not over sharp, but quite sensible, and good-tempered. He has never had a day's serious illness. X rays showed advanced ossification. His heavy features are rather suggestive of pituitary affection. The blood-pressure has not been remarkable. His sight is good. The sexual development has been a feature of the case, but there has not been any trouble with the boy. He is remarkably strong for his age. Present weight, 7st.; present height, 4 ft. 9 in.

Philadelphia Pediatric Society.

February the 11th, 1913, Theodore Le Boutillier, M.D., President.

An Albino Family.—Dr. Frank Crozer Knowles presented a family consisting of seven boys, five of them normal and three of typical albino type. The eldest, third, fifth and seventh boys have blue eyes, are intelligent and normal. The second, fourth and sixth sons have pink eyes and all the associated symptoms of albinism. The parents are Italians, with blue eyes and rosy cheeks, the picture of good health. No cases of this affection could be determined among the antecedents. While two of the albino boys exhibited normal intellect, the third was somewhat of the cretin type. Photophobia and nystagmus were marked in all three boys.

Adrenal Hæmorrhage in the Newborn.—Drs. C. B. Farr and R. A. Glenn (by invitation) showed a specimen of adrenal hæmorrhage in a newborn infant into the peritoneal cavity, from the service of Dr. W. R. Nicholson at the Presbyterian Hospital. The baby's mother was a primipara but labour was not unduly prolonged or abnormal. No instruments were used and there is no record of any fall or injury after birth. At birth the baby had no deformities and weighed 9 lb. 1¼ oz. The third day the child was found dead, no symptoms having been noted except a rise in temperature to 99·2° F. on the day he died. The body appeared to be that of a healthy, well-developed, well-nourished baby. There was moderate pallor. The cord had not separated but appeared normal. Thoracic organs were normal except the right lung, which showed congestion at the base. The foramen ovale was patulous and the thymus large. The peritoneal cavity contained a considerable quantity of free clotted blood, confined largely to the right side. About the right kidney was extensive retroperitoneal hæmorrhage, bulging forward the peritoneum and separating the layers of the mesocolon. At the most prominent part was a short tear from which the intra-peritoneal hæmorrhage had come. On section, kidney and adrenal were found surrounded by laminated clots with soft and recent clots near the periphery and in the region of the peritoneal tear. The kidney was not involved, but the adrenal seemed to be disintegrated. Microscopic sections showed the cortex well preserved, but the medulla destroyed by the extensive hæmorrhage. There were many dark granules, evidently pigment, as described by Hamill ('Arch. of Pediat.,' 1901, xviii, pp. 81 and 161). Hamill collected 90 cases, including his own, while Arnaud ('Arch. gén. de Med.,' 1900, ii, p. 5) collected 80. In comparatively few of these was there intra-peritoneal hæmorrhage. Hamill reports seven cases in which there was rupture of the sac and extensive hæmorrhage into the general peritoneum, and refers to several others in which there was slight leakage into the peritoneum. Arnaud found that capsular hæmorrhage caused no symptoms in more than half of the cases. In many it was a chance finding; rarely did it give rise to demonstrable abdominal tumours. The remaining cases fell into three categories: those with peritoneal symptoms; those with symptoms suggestive of capsular insufficiency, typical Addison's disease rarely, if ever, developing; and finally, those with symptoms referable to involvement of the abdominal sympathetic. The latter type Arnaud

considers most common. Hamill thought that hæmorrhage of this character occurring before or during labour was commonly traumatic; after birth, either before or after separation of the cord, infectious. It is generally conceded that the adrenal vessels are particularly frail and poorly supported. At times the vessel-walls may be the seat of local disease in addition. The exciting causes may be various but fall under the headings of direct trauma and congestion, the latter as a rule passive, due to pressure on the larger veins. There was no evidence of infection in the present case unless the slight rise of temperature be regarded as such. No cultures were taken.

Dr. S. McC. Hamill referred to the case which he had reported to the American Pediatric Society in 1900. Hæmorrhage of lesser degree was a very common finding in autopsies among newborn infants, especially in those infants dying of the so-called infections of the newborn. There had been, however, but a limited number of cases of rupture into the peritoneal cavity reported up to the time that this case was reported—probably six or eight. In his paper Dr. Hamill had laid much emphasis upon the infectious origin of many of these cases, but in the light of more recent investigation, it would seem that a larger percentage of those cases are due to other causes than he had been willing to admit. Dr. Hamill presented the drawing made from the specimen in his case, which was practically identical in appearance with the specimen which Dr. Farr had exhibited.

Dr. J. P. Crozer Griffith recalled a case in which a baby about two days old had died suddenly, and on autopsy the peritoneal cavity was found filled with blood which came from rupture of the suprarenal body. There had been no fever or other evidence of sepsis. The most frequent form of hæmorrhage in the newborn dependent upon trauma or some other unexplained cause would seem to be intra-cranial, while the next most frequent is from the suprarenal body. In the hæmorrhagic disease of the newborn, the hæmorrhage from this body is of an entirely different nature.

Gastric Retention and Intestinal Stasis in Infancy.—Dr. Nathaniel Ginsburg presented about thirty bodies of newborn infants, in which the intestines had been dissected cut, showing some possible anatomic causes of gastric retention and intestinal stasis. He demonstrated the specimens in detail. An elongated sigmoid was found in all these infants. It seemed possible, when there was no palpable pyloric stenosis, that the obstruction might be at the duodeno-jejunal angle, since Lane had shown conclusively that angulation did occur at the duodeno-jejunal junction. Every large sigmoid was not, however, abnormal. In many adults the elongated sigmoid was found persistent.

Dr. D. J. Milton Miller said that he had always believed that when an abnormally long sigmoid existed at birth, the child later grew up to it and constipation was then relieved. But Dr. Ginsburg's demonstration shows that this may not always occur.

Dr. Griffith said that when pyloric stenosis first came into prominence, many physicians disputed its existence on the ground that at autopsies the pylorus was naturally thickened from agonal contraction. More recently this possibility had been overlooked or disputed. Dr. Ginsburg's interesting observations would appear to raise the question again, at least as applied to some cases. Some of the cases supposed to be pyloric stenosis might be proved to be a condition secondary to obstruction at the duodeno-jejunal angle. At least one of the specimens shown illustrated the possibility of dilatation of the duodenum due to constriction at this point. The adminis-

tration of bismuth ought to show, in such a case, whether the obstruction was actually at the pylorus.

Cholecystitis due to Primary Infection by the Typhoid Bacillus.—Dr. Harry Lowenburg reported a case of cholecystitis due to primary infection of the gall-bladder by the typhoid bacillus in a boy, aged 3 years. The chief complaint was constipation and fever followed by diarrhœa. He had been sick for two weeks before admission to Mt. Sinai Hospital. Death occurred two weeks later.

Dr. Lowenburg also reported a case of fatal streptococcic arthritis complicating lobar pneumonia in a baby aged 14 months.

Can Teething produce Morbid Symptoms?—Dr. D. J. Milton Miller, of Atlantic City, read this paper. The fact that primary dentition is often associated with local and constitutional disturbances cannot be disputed. These disturbances are repeated with each incoming tooth so regularly that we cannot escape the inference that the two phenomena are connected. Scientific methods have curtailed the dentition ailments materially. But it should not be forgotten that pregnancy, paturition and the menopause are attended by discomfort and even grave deviations from the normal. There can be no question of pressure, since the teeth have abundant room to emerge, meeting with no resistance from the soft structures above. The symptoms, then, must be attributed to reflex influence and to the conception that the delicate infantile organism reacts in manifest ways to a sensible irritation. May not a tender mouth, deranged digestion and dentition be expressions of a general hyperæsthesia of the alimentary tract due to the great activity of the vital processes during the dentition period? The uniform painlessness of the second dentition may be explained by affirming that the child is now too old to be affected by sensible irritation. Yet coryza may occur with each second tooth, and second dentition may be a contributing cause of chronic intestinal indigestion. In about one half of all infants observed, symptoms occurring during teething are not to be explained by any other discoverable cause than the teething. Among the local symptoms may be redness, stomatitis, excessive salivation, anorexia, restlessness, sleeplessness and irritability. Fever and disturbances of digestion may occur. Yet we must remember that all diseases in infancy demand prompt treatment, whether the child is teething or not. Lancing the gum often relieves in a surprising way the symptoms of morbid dentition.

Dr. Theodore Le Boutillier said that he had seen two infants in convulsions due to teething, in whom the convulsions ceased upon lancing the gum and that they did not return. In another case diarrhœa occurred in spite of correct feeding and seemed to be due to teething only; just as soon as the tooth erupted, diarrhœa disappeared. Many nervous conditions seemed to be induced by dentition. The correct time for lancing was when the gums were swollen and showed a tiny pearly spot. Relief was immediate. He had never had any infection follow. Teething causes many such reflex troubles and lancing is then indicated.

Dr. Griffith's views were of a very positive nature. When a young man he had been given a gum-lancet which he had at first used frequently. He had lost it some time ago and had never felt it necessary to replace it.

Société de Pédiatrie, Paris.

January the 14th, 1913. (*Bulletin No.* 1.)

Rare Urethral Malformation.—MM. Veau and Montet showed a child, aged 14 years, with hypospadias and complete integrity of the prepuce. Outwardly nothing could be seen, but on uncovering the glans it was seen to be spread out, a large urethra appearing at the bottom of an infundibulum. As there was no obstruction to the flow of urine no interference was considered necessary.

Prevention of Contagion in Home for Weakly Children at Médan.—M. Mery gave statistics for three years, which showed that the majority of deaths resulted from measles, and proposed a special method of isolation.

Dislocation of Patella.—Mme. Nageotte-Wilbouchewitch showed a girl, aged 15 years, who had dislocation of the patella and large effusion into the joint as the result of a slight blow. She had a marked laxity of all the ligaments.

Hypertrophic Warty Papillomata of Vulva; Good Effect of Radiotherapy.—M. Comby showed a child, aged 3 years, in whom large masses of growth disappeared after three applications of X rays. Wassermann reaction was positive. There were no gonococci.

The Value of Desiccated Milk.—MM. Variot, Zuber, Lavialle and Sédillot were of opinion that the use of desiccated milk did not give such satisfactory results as had been advanced by earlier observers. Administered under the most favourable circumstances it seemed less satisfactory than scalded homogenised milk, which served for comparison. The increase of weight was not so rapid even in the most favourable cases. On the other hand, out of fourteen children eight were quite incapable of assimilating it, and their weight became less. The claims put forward as to the possibility of restoring feeble or atrophic infants seemed not proven. The occurrence of diarrhœa in eight out of fourteen children compelled its discontinuance either wholly or temporarily. Six out of fourteen infants below the age of five months increased in weight for one or two months while on desiccated milk, but less than they did with scalded milk. Three children died of diarrhœa during the month of July.

Inefficacy of Serum-therapy per Rectum.—MM. Lesné and Dreyfus contended that their experiments proved that if microbic toxins can penetrate the rectal mucous membrane they are rendered harmless. In normal individuals with sound livers the possibility of an intoxication of intestinal origin by microbic toxins alone is very doubtful. The administration of anti-tetanic and anti-diphtheritic sera *per rectum* should be discontinued.

Vincent Dickinson.

HISTORICAL MEDICAL EXHIBITION, LONDON, 1913.

Among other historical medical objects of exceptional interest that have been secured for the Historical Medical Exhibition, organised by Mr. Henry S. Welcome, and which will be opened in London during the meeting of the International Medical Congress in the coming summer, are many personal relics of Dr. Edward Jenner, the discoverer of vaccination. These include the original lancets and scarifiers he employed during his first experiments, his case and account-books, his snuff-box, medicine chest, and many other interesting articles. A large collection of autograph letters of Jenner's, some of unique interest, have also been loaned, together with the armchair from his study, and in which he died. Other objects connected with the life of Jenner are also to be exhibited, including many valuable portraits of himself and family, painted at different periods, the illuminated addresses presented to him, together with the freedoms of the cities of London and Dublin, also medals, and other documents of special interest.

Concerning the history of anæsthesia, many interesting relics are to be exhibited, beginning with the original autograph journal and manuscripts of Henry Hill Hickman, F.R.C.S., the discoverer of the application of the principle of anæsthesia by inhalation for surgical operations, which he proved by actual experiments on animals in 1823. Personal relics of Sir James Simpson, and some of the earliest forms of apparatus for administering chloroform and ether, will constitute an exhibit of more than usual interest.

Those who may possess any objects of a similar character connected with the history of medicine and the allied sciences, and who would be willing to loan them, should communicate with the Secretary, 54a, Wigmore Street, London, W., who will be pleased to forward a complete illustrated catalogue to anyone interested.

Abstracts from Current Literature.

Medicine.

Reflexes in the fœtus (*'Rev. Neurolog.,'* 1912, II, *p.* 434).—**K. Krabbe** examined the reflexes in a fourth month female fœtus, who lived for half an hour after birth. It was 24 cm. long and showed active movements of the extremities. The heart was beating quickly, the eyes were closed, and there was no reaction to pin-pricks on the face. No masseteric nor pharyngeal reflex could be obtained. In the upper extremity no reflex could be got by percussion of the bones or tendons, but short and sharp movements of the muscles resulted from direct percussion. Direct percussion also produced contraction of the pectoralis major, which was also obtained by stroking the skin over the front of the chest. The abdominal reflexes were active, the knee- and ankle-jerks were absent, and no muscular contraction could be obtained by direct percussion. The plantar reflexes were flexor. Oppenheim's reflex was not obtained. There was no anal reflex. All the reflexes were equal on both sides. No macroscopical changes were found in the brain post mortem. J. D. Rolleston.

Care of premature infants (*'Arch. of Pediat.,'* 1912, XXIX, *p.* 438).—

R. Durham gives the following statistics from the records of the Sloane Maternity Hospital. In 2314 births there were 410 premature babies, of which 74 were stillborn. Of the remaining 336 cases, 85 were treated as infants at term, and 4 died; 145 were wrapped in cotton-wool and not placed in the incubator, and 12 died; 106 were treated in the incubator; in the first four days 29 died (6 being under seven months' gestation) and 77 survived. Of the latter, one third were known to be living after a period of from three months to three years; 5 of these babies weighed less than 3 lb.

REGINALD MILLER.

The infant pulmotor: an apparatus for artificial respiration on asphyxiated newly born infants (*'Amer. Journ. Obst.,'* 1913, LXVII, *p.* 255).—**J. C. Edgar** describes this instrument, with a diagram, the mechanism of which consists of forcing oxygen or atmospheric air into the lungs at the given pressure desired, and emptying the lungs of the bad air, which is expelled outside. This is done by means of two tubes terminating in a breathing mask fitted closely to the child's mouth, and attached to a cylinder of oxygen.

F. R. B. ATKINSON.

The use of the mucus extractor in asphyxia neonatorum (*'Austral. Med. Gaz.,'* 1912, XXXII, *p.* 528).—**H. B. Oxenham** recommends the use of this instrument in cases of stertor of the newly born.

F. R. B. ATKINSON.

Suffocation by mother's milk (*'Norsk Mag. f. Lægevid.,'* 1913, LXXV, *p.* 204).—**J. Hjort.**—A female infant, aged 8 days, became cyanosed and dyspnœic shortly after being put to the breast. Death took place in about twelve hours. Post mortem the trachea and bronchi to their finest divisions were found to be filled with milk. No similar case has been recorded.

J. D. ROLLESTON.

Stenosis of the bile-duct in the newly born (*'Monatsschr. f. Kinderheilk.,'* 1912, XI, *p.* 294).—**K. Sugi** narrates the following result of a post-mortem examination on a child, aged 3 weeks: Suffusion of the skin, navel and pleura, with ecchymoses of the thymus, testicle, epicardium, and mucous membrane of the digestive tract, stenosis of the hepatic duct and of both of its chief branches. The stenosis was of an inflammatory nature and affected also the ductus choledochus. Lues was excluded and no cause could be found for the change.

F. R. B. ATKINSON.

Idiopathic icterus neonatorum (*'Thèses de Paris,'* 1912–13, *No.* 113).—**E. Bédier** examined thirty-seven cases at the Clinique Baudelocque and thirty-five normal infants. He found that multiparity, premature birth, and the weight of the child could not be regarded as ætiological factors of the icterus, which is due to a special fragility of the red cells in the newborn.

J. D. ROLLESTON.

Fatal jaundice of the newly born (*'Austral. Med. Journ.,'* 1912, I, *p.* 667).—**W. Summons** describes the case of a child who died on the seventh day after birth from the above condition, which also had been the cause of death in two other children shortly after birth in the same family.

F. R. B. ATKINSON.

Rectal muco-epithelial plugs and stenosis of the bowel in the newly born (*'Jahrb. f. Kinderheilk.,'* 1912, LXXVI, *p.* 678).—**Trumpp** states that his case, occurring in a child, aged 2½ days, is only the fifth published in the literature. Section showed stenosis of the upper part of the jejunum with marked dilatation of the duodenum and muscular hypertrophy above the stenosis, a second stenosis 4–5 cm. below the first, collapse of the small and large intestine, and persistence of the whole meso-colon and meso-duodenum. F. R. B. ATKINSON.

A case of doubling of the great intestine (*'Glasg. Med. Journ.,'* 1912, II, *p.* 431).—**A. Blair Aitken** reports this case in a female infant, the subject of a large congenital umbilical hernia. The infant was seen seventeen hours after birth, but was not considered a fit subject for operation, and death took place on the following day. There was no duplication of other organs nor was any skeletal abnormality noted. J. ALLAN.

Hæmorrhagic diseases of the newborn (*'Med. Review, St. Louis,'* 1913, LXII, *p.* 6).—**A. S. Pike.**—A male infant, breast-fed, had considerable hæmaturia on the third day of life. He was then given modified cow's milk in the hope of saving strength necessary for nursing, for which he was afterwards too weak. The next day there were repeated hæmorrhages from the penis, rectum, nose and mouth, accompanied by screaming and convulsions. Two thirds of a suprarenal tablet was given two-hourly, followed later in the day by calc. chlor. gr. iij. as well. The hæmorrhages stopped the following day and complete recovery took place. J. D. ROLLESTON.

Suprarenal hæmatoma in a newborn child (*'Jahrb. f. Kinderheilk.,'* 1913, LXXVII, *p.* 88).—**A. v. Reuss.**—At the end of the second day of life the child showed fever, marked pallor and cyanosis, and refused nourishment. Death took place on the sixth day after repeated vomiting. The necropsy showed a hæmatoma the size of a hen's egg in the right suprarenal, that had ruptured into the retro-peritoneal connective tissue and infiltrated the whole mesentery. There was a small hæmatoma in the left suprarenal. Suprarenal hæmatomata are probably not so rare as is thought. Trauma at birth is only a predisposing cause. The disease should be ranked among the hæmorrhagic diatheses of the newborn. J. D. ROLLESTON.

Spontaneous recovery from hæmorrhagic disease of the newborn (*'Jahrb. f. Kinderheilk.,'* 1913, LXXVII, *p.* 89).—**A. v. Reuss.**—The child showed at birth a large swelling over the left parietal bone. On the third day there were deep blue coloration of the skin of the pinnæ and eyelid, epistaxis, two dark stools and deep icterus. The general condition was good. The hæmorrhages stopped at the end of the first week.
J. D. ROLLESTON.

Hæmophilia neonatorum in a family of four infants (*'Arch. of Pediat.,'* 1912, XXIX, *p.* 761).—**R. L. Pitfield.**—All these male infants were icteric at birth and shortly afterwards. The first vomited dark material and passed tarry stools soon after birth but finally recovered. The second had subdural hæmorrhages, manifested by convulsions and coma. Recovery took place, but at five years the child could hardly walk, and was mentally defective. The third child died from subdural hæmorrhages, verified post mortem, after living seventy-two hours. The fourth child showed minute petechiæ when twenty-

four hours old: 72 c.c. of human blood-serum were injected subcutaneously in doses of 4–15 c.c.; the petechiæ disappeared and this child recovered.
J. D. Rolleston.

Blood transfusion for hæmorrhagic diseases of the newborn (*'Boston Med. and Surg. Journ.,'* 1912, I, *p.* 627).—**Beth Vincent** records four successful cases in which the radial artery of the father, who acted as donor, was connected by a coated glass tube with the external jugular vein of the child. He had previously (*'Amer. Journ. Dis. Child.,'* 1911, I, *p.* 376) published three cases in which the donor's radial artery had been connected with the recipient's femoral vein, but the latter's awkward position, depth, and numerous branches made it less suitable than the external jugular vein. J. D. Rolleston.

A case of allergy to common foods (*'Amer. Journ. Dis. Child.,'* 1912, III, *p.* 341).—**O. M. Schloss.**—In a boy, now aged 8 years, marked urticaria was caused by the ingestion of eggs, almonds, and oatmeal. The idiosyncrasy to eggs was not congenital, but was acquired some time between ten days and fourteen months. Symptoms due to the ingestion of oats appeared some time after the child had first eaten oatmeal, when he was twenty-two months old. The idiosyncrasy to almonds was manifested the first time the food was taken, at the age of six years. Cutaneous inoculation of these and certain allied food substances produced an urticarial wheal at the site of inoculation. The cutaneous reaction was produced only by the protein constituents of eggs, almonds and oats. Some of the active proteins caused urticaria by mere contact with the unbroken skin. It was possible passively to sensitise guinea-pigs to ovo-mucoid (one of the active proteins from eggs) by intraperitoneal injections of the patient's serum. By giving ovo-mucoid in gradually increasing doses the patient became immune to eggs. At the same time immunity to oatmeal and an apparently decreased sensibility to almonds occurred. J. D. Rolleston.

Alimentary anaphylaxis to eggs (*'Arch. de méd. des enf.,'* 1913, XVI, *p.* 81).—**E. Lesné** and **Ch. Richet,** fils, consider the subject, as follows. *Ætiology:* Anaphylaxis may occur at all ages, but is more common in earlier years. It exists for raw, slightly cooked, or hard-boiled eggs, but it is less marked after the latter. The white or the yolk may give rise to the symptoms. Many members of one family may be affected. *Symptoms:* They may be slight, and manifest themselves by cutaneous troubles, especially urticaria and partial œdema, or severe, associated with gastro-intestinal affections, and give rise to the symptoms of cholera. *Prognosis:* This is always favourable. *Diagnosis:* The appearance is sudden, occurring immediately after the ingestion of a small amount of egg. The appearances are exactly similar to experimental anaphylaxis, and arise each time after an egg is taken. *Pathogeny:* This is the same as in all other cases of alimentary anaphylaxis, and is due to indigestion of the egg, a part of the antigen passing into the circulation. *Treatment:* This is chiefly preventive. A child, up to five years of age, should never take more than one egg a day. When the symptoms are acute, shock should be treated by stimulants and all eggs withheld. The treatment must be symptomatic. F. R. B. Atkinson.

A case of common salt poisoning (*'Journ. Amer. Med. Assoc.,'* 1912, LIX, *p.* 1290).—**O. H. Campbell** records a fatal case in a boy, aged 5 years, whose mother had given him an enema containing a pound of salt in a quart

of water. Five to ten minutes after the enema the child had severe headache, vomiting and purging, and within thirty minutes became unconscious and had a series of convulsions. An hour before death, which occurred five hours after the enema had been given, the temperature was 104·6° F. and the pulse about 200. No necropsy. J. D. Rolleston.

Sodium chloride fever (*'Monatsschr. f. Kinderheilk.,'* 1912, xi, *p.* 387).—**B. Bendix** and **J. Bergmann** come to the following conclusions: (1) A solution of sodium chloride (0·75 per cent.), prepared with every precaution from fresh distilled water, does not produce fever. (2) Solutions prepared by the chemist from distilled water, left for a longer or shorter time, can produce fever when injected hypodermically. (3) Solutions carefully prepared in the laboratory, but preserved in an open bowl without any care regarding the temperature of the room, may give the same result, but if preserved at the temperature of the room and kept sealed usually produce no fever, but this cannot be guaranteed. (4) Only pure solutions free from all bacteria should be used for children, and the same applies to infusions for therapeutic purposes. (5) A special distillation apparatus should exist in every children's hospital. F. R. B. Atkinson.

The so-called sodium chloride fever (*'Monatsschr. f. Kinderheilk.,'* 1912, xi, *p.* 125).—**S. Samelson,** from his experiments on sixteen children in the first three months of life, concedes that there is no such thing as sodium chloride fever after subcutaneous injections of sodium chloride in young infants. The phenomenon so described is due, not to the sodium chloride, but to the bacterial toxins in the salt solution. After their removal the febrile reaction disappears. J. D. Rolleston.

Bismuth poisoning (*'Amer. Journ. Med. Sci.,'* 1912, cxliv, *p.* 647).—**L. M. Warfield.**—A girl, aged 9 years, suffering from spinal tuberculosis, had a sinus caused by an ilio-psoas abscess injected with 2 oz. of bismuth subnitrate in November, 1910. The opening promptly closed, and no bismuth was subsequently extruded. Two weeks later a black line was noticed on the gum margin. On admission to hospital in September, 1911, the right edge of the tongue was extensively ulcerated and covered with a white membrane, and similar plaques were present on the right buccal mucosa. The breath was very fœtid. X rays showed the presence of the bismuth in the lumbar muscles. Gradual improvement took place, and when the child was discharged five months after admission the ulceration had cleared up, but the line on the gums was still present. J. D. Rolleston.

Death from strychnine poisoning after snake-bite (*'Austral. Med. Gaz.,'* 1912, xxxii, *p.* 189).—**G. Croll.**—A boy, aged 4 years, was bitten by a death adder at 2 p.m., but was not seen by a medical man until 11.45 p.m. During that time he was given $\frac{3}{20}$ gr. of strychnine. At 11.45 p.m. the child's condition was good. An hour later typical signs of strychnine poisoning occurred and death took place at 1.30 a.m. F. R. B. Atkinson.

Occurrence of acute pneumonia during treatment with arsenic (*'Brit. Med. Journ.,'* 1913, i, *p.* 337).—**F. Parkes Weber** records five cases in children aged from 4 to 15 years who suddenly developed pneumonia while undergoing arsenical treatment for lymphadenoma, chorea or a lichenoid eruption. Two of the lymphadenoma patients also had arsenical herpes

zoster. In all there was a rapid recovery from the pneumonia. The writer thinks that arsenic may predispose to an attack of pneumonia just as it does to herpes zoster. J. D. Rolleston.

Fatal poisoning by tobacco (*'Cleveland Med. Journ.,'* 1913, xii, *p.* 130).—**E. C. Garvin.**—A girl, aged 6½ years, suffering from pin-worms, was given a rectal injection by her mother of a pint of water in which were dissolved 1½ teaspoonfuls of tobacco. Faintness, nausea and vomiting ensued at once, and part of the injection was expelled. Within a quarter of an hour convulsions set in and lasted twenty minutes. Death took place forty-five minutes after the injection before any treatment had been given.

J. D. Rolleston.

Intoxication due to paratyphoid B bacillus (*'Bull. et mém. Soc. méd. Hôp. de Paris,'* 1912, xxxiv, *p.* 752).—**H. Triboulet, R. Debré** and **J. Paraf.** —A boy, aged 4 years, and his sister, aged 6 years, were admitted to hospital in a condition of collapse with diarrhœa and vomiting. The father, mother and grandmother had also some digestive disturbance, but of slight degree. It was found that the symptoms had followed a meal of black-pudding, being most marked in the case of the boy, who had eaten the pudding exclusively. The paratyphoid B bacillus was isolated from the fæces and urine of the boy and the fæces of the girl. Their blood-cultures were negative. Cultures and inoculations of the pudding proved negative, probably only a part of it being infected. J. D. Rolleston.

The ætiology of Little's disease (*'Gaz. des Hôp.,'* 1912, lxxxv, *p.* 522). —**L. Babonneix** records a case to show that in addition to obstetrical trauma and syphilis other infections may enter into the ætiology of Little's disease. A previously healthy woman developed mumps in the fifth month of pregnancy. The child, who was born at full term and with an easy labour, presented typical symptoms of Little's disease, but the symptoms subsequently disappeared and the child learnt to walk and talk at the usual period. J. D. Rolleston.

The atrophic form of Little's paralysis (*'Journ. Amer. Med. Assoc.,'* 1912, lix, *p.* 175).—**E. A. Rich** describes two cases of this form of the disease, which is characterised by a lack of development accompanied by an atrophy of all the parts of the body except the bony skeleton. Pathological anatomy reveals a lower cortical involvement than the ordinary type, involving the pituitary body and the pons, but not so much the cranial vessels. The prognosis is more grave than in the usual type.

F. R. B. Atkinson.

Pathological anatomy of cerebral diplegia in children (*'Jahrb. f. Kinderheilk.,'* 1912, lxxvi, p. 1).—**S. Miura** describes two cases of this condition with the pathological findings and believes that the vascular theory best explains the pathogenesis of the disease. He believes that the traumatic factor of birth is the cause of the hæmorrhage.

F. R. B. Atkinson.

Total softening of both cerebral hemispheres in a child five months of age (*'Jahrb. f. Kinderheilk.,'* 1912, lxxvi, *p.* 552).—**E. Meier** describes the case of a healthy child of healthy parents, in whom there were no morbid

symptoms up to eight weeks after birth. In the ninth week vomiting and convulsions occurred, and at the fifth month a left-sided empyema developed. Post-mortem examination revealed destruction of the white matter of both hemispheres. The author finds no case in the literature similar to his own, neither can he form any conclusion for the reason of its appearance. F. R. B. Atkinson.

Porencephaly (*'Brit. Med. Journ.,'* 1912, II, p. 973).—**R. Eager** records a case in a boy, aged 7 years. The cranium contained about five pints of clear watery fluid. The remnants of brain structure were lying on the base of the skull in a flattened condition and only weighed $13\frac{1}{4}$ ounces. The right lung and pleura and the spleen showed tuberculous foci, and there was considerable enlargement of the mesenteric glands. J. Allan.

Three cases of acute ataxia in children (*'Austr. Med. Gaz.,'* 1912, XXXII, *p.* 141).—**W. F. Litchfield** reports the following cases: (1) Marked ataxia of the cerebellar type in a girl, aged 17 months. The lesion was probably in the dentate nucleus. (2) Boy, aged 11 years. Cerebellar ataxia with increased knee-jerks. (3) Boy, aged $6\frac{1}{2}$ years, with continuous and universal chorea and ataxia. The lesion probably concerned the cerebello-rubro-spinal tract. F. R. B. Atkinson.

Ventricular hydrocephalus caused by a cerebral tumour (*'Arch. de méd. des enf.,'* 1912, XV, *p.* 527).—**J. Comby** describes a very rare case in a girl, aged 21 months, in whom post-mortem examination revealed an epithelioma at the posterior angle of the left lateral ventricle, and very dilated lateral ventricles. F. R. B. Atkinson.

A case of tubercle of the cerebellum; decompressive craniectomy; acute tubercular meningitis (*'Arch. de méd. des enf.,'* 1912, XV, *p.* 610).—**M. de Vaugiraux** describes this case in a girl, aged $9\frac{1}{2}$ years. Post-mortem examination revealed a tumour occupying nearly the whole of the left lobe of the cerebellum, which showed a caseous tubercle.
F. R. B. Atkinson.

Tumours of the cerebellum in children (*'Wien. klin. Rundsch.,'* 1912, XXVI, *pp.* 81, 100, 116).—**Velebil** recounts a case in a girl, aged 9 years, who was under observation for three and a half months. The chief symptoms were—three years previously spasm of the heart, for a year headaches, pains in the neck, tremors of the hands and feet, taciturnity, general apathy, drowsiness, slow, soft articulation, right facial paresis coming on gradually and motor ataxy of the right arm. The tone of the right arm and leg was somewhat diminished and later hemiparesis and atrophy occurred. Knee-jerks increased, gait ataxic, patient swaying to the left, later on the patient lost her equilibrium and could not sit. Double optic atrophy and amaurosis. The pupils finally did not react at all; ptosis of the right upper lid. Vomiting of cerebral type, constipation, and finally incontinence. The patient broke out into laughter from time to time. Post-mortem examination showed a solitary tubercle of the cerebellum in the vermis and left hemisphere, smaller isolated tubercles in the right frontal gyrus, and the cortex of the left gyrus hippocampi. The relations of the signs and symptoms to the post-mortem findings are discussed in detail and in connection with the literature of the subject. M. D. Eder.

Sarcoma of cerebellum in a boy (*'Journ. Amer. Med. Assoc.,'* 1912, LIX, *p.* 443). **A. W. Hawley** and **J. B. Manning** record a case of round-celled sarcoma in a boy, aged 11 years, remarkable for the lack of localising signs. Cerebellar ataxia and hypotonus, if present, were masked by a general muscular exhaustion when the patient was first seen. Post mortem a soft disintegrating tumour the size of a hen's egg was found on section of the cerebellum, principally affecting the right side. The lateral ventricles were enormously dilated owing to obstruction of the aqueduct of Sylvius.

J. D. ROLLESTON.

Multiple sclerosis in a child, aged 2½ years (*'Jahrb. f. Kinderheilk.,'* 1913, LXXVII, *p.* 94). **E. Nobel.** The symptoms during life were epileptiform attacks, progressive dementia, and a suggestion of spastic and ataxic phenomena. The diagnosis ranged between diffuse sclerosis, diffuse glioma and multiple sclerosis. In favour of the last diagnosis was a temporal pallor of the right papilla and partial left optic atrophy. At the necropsy the brain and cord were normal macroscopically, but histological examination showed the existence of multiple sclerosis (*cf.* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1911, VIII, *p.* 472).

J. D. ROLLESTON.

Juvenile tabes (*'Amer. Journ. Dis. Child.,'* 1912, III, *p.* 236).—**G. E. Price** and **C. E. G. Shannon** record a case in a girl, aged 14 years, who had been suffering from failing vision for the last two years. Father's history negative; mother a drinker and led a dissolute life; there was no history of specific disease, but she had had one miscarriage. One brother and two sisters, all healthy. Since the onset the patient had had headache and at times complained of stabbing pains in the knees. For the last eighteen months she had had more or less urinary incontinence. Vision in each eye reduced to bare light-perception. Argyll-Robertson pupil was demonstrable. Double optic neuritis. Gait and stature normal. Slight ataxia of upper extremities. No knee or ankle jerks. Wassermann positive. Cerebro-spinal fluid: reactive alkaline, albumin increased, urea absent, no increase of lymphocytes, no bacteria. The authors review the literature, including the paper by Dr. Ernest Jones in THE BRITISH JOURNAL OF CHILDREN'S DISEASES, 1908, V, *p.* 131.

J. D. ROLLESTON.

General paralysis in children (*'Rev. méd. de la Suisse rom.,'* 1912, XXXII, *p.* 742).—**F. Naville** records two cases: (1) Girl; onset of symptoms at 7½, died at 12½. No history or clinical evidence of inherited syphilis, but Wassermann positive in blood and cerebro-spinal fluid. (2) Boy; onset of symptoms at 6, death at 17. No history of syphilis. In both cases the diagnosis was confirmed by necropsy.

J. D. ROLLESTON.

Surgery.

A fœtal monster (*'Semana Medica,'* 1912, XIX, *p.* 184).—**Bengolea** describes a notencephalic child to whom a primipara aged twenty-two gave birth. Following the rule it was a normal vertex presentation. The face was well developed, the eyes deviated upwards, and the deformed ears were almost horizontal. The frontal bone was quite absent, the parietals almost entirely, as well as a large part of the occipital bone. Instead of bone there was a soft vascular growth, caused by a proliferation of the conjunctiva due to a meningitis. The growth had invaded the cerebral matter and had finally destroyed the cranium. A Wassermann reaction on the mother proved negative.

M. D. EDER.

A living monstrosity with oblique cleavage of the face (*'Jahrb. f. Kinderheilk.,'* 1912, LXXVI, *p.* 71).—**H. Preusse** describes a case of a boy, born at term, in whom, besides other deformities of the toes and fingers, there existed marked hydrocephalus and a completely open frontal suture extending from the root of the nose upwards, so that the median line deviated to the left. The left eye was represented by a pigment-spot in the lower third of the conjunctival sac. On both sides the jaw, gums and lips were cleft. The child died from pneumonia in the eighth week.

F. R. B. ATKINSON.

Multiple malformations in the newly born (*'L'Echo Méd. du Nord,'* 1912, XVI, *p.* 546).—**Leborgue** showed the cadaver of a child just born at the Soc. de Méd. du Dép. du Nord on October 25, 1912. The malformations were as follows: (*a*) Double club-foot; (*b*) spina bifida. (*c*) absence of various ribs; (*d*) osseous masses at the level of the fifth dorsal vertebra; (*e*) general ptosis of the abdominal viscera; (*f*) large left inguinal hernia, consisting of the major part of the small intestine, the cæcum and the appendix; (*g*) absence of ossification in many parts of the parietal and occipital bones.

F. R. B. ATKINSON.

A very rare teratological case (*'Arch. Brasil. de Med.,'* 1912, II, *p.* 439).—**C. Wallace.**—A female child, aged 18 months, was brought to hospital for an enormous tumour occupying the left fronto-parietal and facial regions. Circumference, 64 cm.; vertical diameter, 19 cm.; transverse, 13 cm.; antero-posterior, 22 cm.; weight about 3 kilos. The left eyeball was invisible and the ear rested on the shoulder. At the operation a dark turbid fluid like that of a hydro-hæmatocele was first evacuated, and then a rudimentary fœtus attached by a placenta to the inner wall of the tumour was extracted. Death from collapse occurred two hours after the operation. Details of the case are to be published by C. L. Kuhl in his thesis.

J. D. ROLLESTON.

Familial series of congenital malformations (*'Gaz. hebd. des Sci. méd. de Bordeaux,'* 1912, XXXIII, *p.* 548).—**Petit de la Villéon.**—The family consisted of a grandmother, mother, and three children. The grandmother, mother, daughter aged 6 years and son aged 3 years, had unilateral congenital dislocation of the hip, and a male infant aged 3 months had double pes equino-varus.

J. D. ROLLESTON.

Congenital absence of both clavicles (*'Journ. Amer. Med. Assoc.,'* 1912, LIX, *p.* 1192).—**M. Reichmann** records a case in a man, aged 32 years, with no family history of skeletal abnormalities. Both clavicles were shown by the X rays to be completely absent. A strong fibrous cord could be felt in their place. There was no malformation of the skull. Reichmann could find only twenty-two other cases on record. Usually both clavicles are missing. In only three cases was the defect one-sided. With the exception of two cases the defect was incomplete.

J. D. ROLLESTON.

Poly-, pero-, and syndactylism (*'Allg. Wien. med. Zeit.,'* 1912, LVII, *pp.* 399 and 409).—**Zilz** gives four skiagrams of the hands and feet of a child, aged 8 days, with deformities of the fingers. In either foot there was an extra toe. In the right hand there were five normal metacarpal bones. Apart from a fleshy appendix with an osseous core on the ulnar side there

was an extra finger between the middle and ring fingers; the first (rudimentary) phalanx was fused with the ring finger at its base. On the thenar eminence there was a slightly pedunculated nodule consisting of fat. On the left hand only the thumb, index and middle fingers were normally developed. In the place of the ring and little fingers there were three deformed fingers closely intergrown to a shapeless mass. There were fleshy masses on the thenar and hypothenar eminences. There were no instances of malformations in any other members of the family. "The majority of congenital pathological conditions are not inherited, but due to fœtal diseases or other circumstances of intra-uterine life." After a consideration of the various views held about such deformities, Zilz is inclined to regard these cases at all events as due to some primary backward variation of the sperm or unfertilised egg-cells. M. D. Eder.

Madelung's deformity corrected by osteotomy (*'Med. Record,'* 1912, II, *p.* 752).—**H. L. Taylor** records two cases in girls, aged 13 and 15 years, in whom the deformity in each case had started about two years previously. Cuneiform osteotomy was performed in the first case with excellent results. Progressive curvature of the radius was first described by Madelung in 1878, who called it spontaneous subluxation of the hand forwards. The deformity comes on slowly at or just before puberty, being probably associated with the physical softness and laxity of the tissues at that period. Of 64 cases collected by Stetten (*'Surg. Gyn. and Obst.,'* 1909, VIII, *p.* 4), 55 were females, 8 males, and in one the sex was not stated. In forty-three the deformity was bilateral, in twenty unilateral and in one uncertain. X rays showed the radius bowed with its concavity to the plantar aspect, carrying the carpus and hand with it; the ulna does not follow, but projects strongly backwards. Local pain, stiffness and weakness are often present. Diagnosis can be made by the history and X rays from old fractures or dislocations near the wrist, or from congenital dislocation of the ulna backward without curvature of the radius. J. D. Rolleston.

A rare combination of three congenital anomalies in a child: urachus fistula, umbilical hernia and cryptorchism (*'Arch f. Kinderheilk.,'* 1912, LIX, *p.* 233).—**D. Lebedev** describes this case in a child aged 12 months. Fistula of the urachus has only been found in fifty cases as far as is at present known. It is more frequent in males than females, and shows itself by an opening in the umbilical scar from which urine flows. The diagnosis is made by an examination of the fluid, which gives a positive murexide reaction. F. R. B. Atkinson.

Fissure of the lower part of the bladder; inversion; strangulation (*'Journ. d'Urol. méd. et chir.,'* 1913, III, *p.* 25).—**G. Houzel** describes the case of a female child aged 13 months, with the above malformation. The bladder, which protruded below the pubis and above the vagina, was returned and the fissure sutured. The child made a good recovery. The author describes the only four other cases he has found in the literature.
F. R. B. Atkinson.

Perinæal testicular ectopia with strangulated inguinal hernia (*'Arch. de med. des enf.,'* 1913, XVI, *p.* 37).—**R. Français.**—The child was aged 6 weeks, and was cured by a radical cure and reposition of the testicle.
F. R. B. Atkinson.

Dystopia of the internal genitals in young girls (*'Jahrb. f. Kinderheilk.,'* 1912, LXXVI, *p.* 568).—**J. Vas,** after considering some of the literature, comes to the conclusion that the condition is more common than is supposed. He believes the herniæ occur immediately after birth or in the first years. Among eight cases, two manifested appearances of strangulation. Vas thinks that the presence of a hernia directly after birth, the similarity of its form and consistence to the ovary, difficulty of reposition and tendency to strangulation should draw the attention to the possibility of dystopia of the internal genital organs. F. R. B. ATKINSON.

Torticollis (*'Post-Graduate,'* 1912, XXVII, *p.* 575).—**C. Ogilvy**.—The congenital cases are due to shortening of the sterno-mastoid. In very early cases manipulation may overcome the deformity, but after a year it is useless. Massage and mechanical treatment are of no value. Subcutaneous tenotomy should never be done, owing to the danger of injuring subjacent structures as the carotid artery, jugular vein, and pneumogastric nerve, and because it is necessary to cut the sheath of the tendon posteriorly as well as anteriorly. The open operation is strongly recommended, followed by forcible manipulation to correct the deformity, and the correct position must be kept by a plaster-of-Paris dressing encircling the head, including the neck and thorax. This dressing is heavy, and may be replaced by a large wad of gauze over the affected side of the neck, wound round with a bandage applied in the direction of the correction of the deformity. At the end of a week a tighter bandage may be applied. From the fifth to the tenth week the patient may be extended for five minutes twice a week.
J. PORTER PARKINSON.

Torticollis and congenital dislocation of the hip (*'Gaz. hebd. des Sci. med. de Bordeaux,'* 1912, XXXIII, *p.* 473).—**Codet-Boisse** describes a case of 8 years of age cured of the above deformities. He considers that Couvelaire's theory best explains the condition of affairs, viz. a primary myositis of the sterno-cleido-mastoid causing rupture of the fibres, and likewise a myositis of the femoral muscles permitting of the dislocation of the hip.
F. R. B. ATKINSON.

A new symptom in congenital dislocation of the hip (*'Journ. de Méd. de Paris,'* 1912, XXXII, *p.* 27).—**Savariaud** attaches much importance to the great increase of shortening which appears on flexing the thighs, when the obvious shortening of the affected leg is considerably increased. The method of examination is as follows: Lay the child flat on its back with both legs extended; notice the apparent shortening on the affected side; then make the child sit up, keeping the legs extended at the knees, the apparent shortening will appear to be increased. This sign is nearly always present, can be produced without any complicated or painful procedure, and so is of much clinical value. J. PORTER PARKINSON.

Bow-legs in small children (*'Practitioner,'* 1913, XC, *p.* 431).—**P. B. Roth** divides the cases into mild, which are cured by suitable splints, and severe, which require division of the bones. He recommends manual osteoclasis in preference to osteotomy of the tibia and fracture of the fibula. The leg is broken by the hands over a suitable fulcrum, and then placed between two lateral splints. After recovery from the anæsthetic, ʒj of syrup of chloral or $\frac{1}{16}$ to $\frac{1}{12}$ gr. of morphia should be given to ease the severe pain.
F. R. B. ATKINSON.

The occurrence and ætiology of club-foot (*'Journ. Amer. Med. Assoc.,'* 1912, LIX, *p.* 1940).—**A. Ehrenfried** estimates that congenital talipes occurs approximately once in every thousand births, and in one tenth of all infants with congenital deformities. Of the two important types, equino-varus constitutes about 80 per cent. and calcaneo-varus 20 per cent. Forms which cannot be classified under one or the other of these divisions are rare. The fixed type of calcaneo-valgus is less common than the potential type. Equino-varus on one foot and calcaneo-valgus on the other is quite unusual. About 70 per cent. of the patients are male and 30 per cent. female; 55 per cent. are double, and 45 per cent. single. Of the single cases, 60 per cent. are right and 40 per cent. left. Club-foot is known to have appeared in near relatives in 5 per cent. About 33 per cent. of all the patients are first-born; in about 16 per cent. delivery is difficult; in 4 per cent. birth is premature and in 2 per cent. illegitimate. The condition appears in twins or triplets four times as often as in single pregnancies It is accompanied by other congenital deformities in 12 per cent. of all cases. There are three ætiological factors to be considered: Heredity, evident in 5 per cent.; early intra-uterine causes, depending on faulty nutrition from a diseased condition of the chorionic villi, evident in 10 per cent., and mechanical causes operating later in intra-uterine life, accounting probably for most of the remainder. In the last class poor hygiene of pregnancy and work during pregnancy are undoubtedly causal factors of considerable importance. T. R. WHIPHAM.

Hypertrophic pulmonary osteo-arthropathy in a child (*'Gazz. internaz. d. med. chir., etc.,'* 1913, *p.* 54).—**V. Fragale** records a case in a male child in whom the characteristic changes in the hands and feet came on after an attack of broncho-pneumonia complicated by empyema at the age of seventeen months, and became more marked until death occurred at the age of four years. Post mortem almost the whole left lung was found to be converted into a necrotic cavity with bronchiectasis and purulent bronchitis in the right lung. The pus contained diplo- and streptococci, but no tubercle bacilli. J. D. ROLLESTON.

Idiopathic psathyrosis (*'Deut. med. Woch.,'* 1912, XXXVIII, *p.* 1875).—**J. Lewy** records a case in a girl, aged 5½ years, the fifth child in a family of six children. Delivery was normal, but at birth she seems to have had intra-uterine fractures of both femora. Before the end of the second year she had a fracture of the left femur, and subsequently very slight injuries caused fresh fractures, the femora being broken five times in all and the bones of the legs four times. None of the other bones were affected. X rays showed that the femora had been broken in the upper third. Double coxa vara resulted. The bones of the thigh and legs were extremely bowed. Cuneiform osteotomy of the tibia was performed to remedy the deformity, but eight weeks afterwards another fracture occurred at the operation site. The child was treated for a long period with thyroid in tablets, but without success. J. D. ROLLESTON.

Bacterial origin of multiple exostoses (*'Rev. d'orthop.,'* 1912, XXIII. *p.* 193).—**Curtillet** describes in detail four cases of multiple exostoses in a family, three in the children and the other in the mother. In these, as in some other reported cases, the law of Bessel-Hagen that there is a direct proportion between the amount of bony shortening on the one hand and the

size and number of the exostoses on the other hand was contravened. It therefore follows that the bony change is not confined to the cartilaginous centres of growth, but also implicates the sub-periosteal tissues. In support of the view that this dystrophy is due to microbic influence several cases are quoted; in Lenormant's case the exostoses appeared during convalescence from a prolonged and severe illness, probably typhoid fever. In a patient under the author's observation the exostoses appeared during chronic poly-articular rheumatism. But the disease which is considered to be most important in the ætiology of multiple exostoses is tuberculosis; Pissavy found a family history of tuberculosis in 43 per cent. and a personal history in 40 per cent. of the cases of multiple exostoses.

H. D. Rolleston.

Simultaneous fracture of the neck of both femora; double trochanteric coxa vara; reduction by manipulation; restitutio ad integrum of the right hip; coxa vara to 90° of the left, complicated secondarily by coxa vara cervicalis (*'Journ. de méd. de Bordeaux,'* 1913, xliii, *p.* 67).—**H. L. Rocher** describes the case of a boy, aged 9 years, who fell from a height of twelve metres. Radiography at various times showed the above lesions.

F. R. B. Atkinson.

Fracture of the skull with depression in a child aged 14 years cured by operation (*'Journ. de Méd. de Bordeaux,'* 1912, xlii, *p.* 637).—**Codet-Boisse.**—The fracture extended from the summit of the cranium to within a finger's breadth of the bridge of the nose. Four or five depressed fragments of bone were removed; the wound healed by first intention.

F. R. B. Atkinson.

Fractured skull, with ruptured middle meningeal artery; operation, recovery (*'Austral. Med. Gaz.,'* 1912, xxxii, *p.* 190).—**O. Smithson.**—A boy, aged 11 years, fell down an embankment and was found unconscious. Consciousness returned in a quarter of an hour, but twelve hours afterwards he complained of violent pain in the head, and he relapsed into unconsciousness with a temperature of 101° F., a pulse of 18, and proptosis of the right eye with widely dilated pupils. Operation revealed a transverse fracture of the base of the skull and rupture of the middle meningeal artery. The artery could not be ligatured; a plug was therefore inserted and the wound closed. Recovery was uninterrupted.

F. R. B. Atkinson.

Two cases of poly-articular tubercular rheumatism with vertebral localisations: acute cervical arthritis, followed in the one by pathological luxation, and in the other by Pott's disease (*'Rev. d'Orthopédie,'* 1911, xxii, *p.* 385).—**Curtillet** and **P. Lombard.**—(1) Girl, aged 12 years; (2) girl, aged 8 years. In the former case there was slight luxation anteriorly of the atlas on the axis vertebra.

F. R. B. Atkinson.

Suppurative arthritis in the infant (*'Arch. prov. de Chir.,'* 1912, xxi, *p.* 457).—**G. Houzel** records three personal cases of mono-articular streptococcal arthritis of the elbow, shoulder, and hip in infants aged 11 months, 2½ months, and 10 months respectively. The first recovered, the other two died. The following *classification* is adopted, with illustrative cases from the literature; (1) Infection *in utero;* (2) infection of puerperal origin;

(3) infection of umbilical origin; (4) infection from purulent ophthalmia; (5) infection from suppurative mastitis; (6) infection from an eruption or skin wound; (7) infection of alimentary origin—(*a*) dental, (*b*) buccal or gastro-intestinal; (8) infection from the respiratory tract; (9) infection due to general diseases, *e.g.* rickets, whooping-cough, influenza. *Pathogeny.*—The majority of cases of suppurative arthritis in infants are of osteomyelitic origin, but a considerable number are due to direct infection of the blood. *Symtomatology.*—The onset is sudden and violent with some constitutional disturbance and high temperature. There are intense pain, deformity, and œdematous swelling of the joint with well-marked superficial venous circulation. *Diagnosis.*—The only condition likely to be mistaken for suppurative arthritis in infants is Parrot's pseudo-paralysis, which is distinguished by absence of pyrexia and signs of inflammation in the joint, and by the presence of heredo-syphilitic stigmata. The *prognosis* is grave, death taking place unless surgical treatment be adopted. The outlook is made worse by complications, *e.g.* broncho-pneumonia and metastatic abscesses in the liver, spleen, kidneys, or bone-marrow. The only *treatment* is immediate arthrotomy. J. D. Rolleston.

A case of pneumotomy for foreign body (*'Lancet,'* 1913, I, *p.* 92).—**T. H. Kelcock.**—A child aged 4½ years swallowed a shawl pin about two inches long, which could not be removed through a bronchoscope, or through a tracheotomy wound. Recourse was had to pneumotomy and the pin removed. Recovery ensued. F. R. B. Atkinson.

Multiple mesenteric chylous cysts (*'Hospitalstidende,'* 1912, LV, *p.* 1525).—**K. Poulsen.**—A girl, aged 7 years, who had had frequent attacks of headache, vomiting, and abdominal pain in the course of the last six months, was admitted to hospital as a case of colitis. Symptoms of peritonitis occurred and laparotomy was performed. Diffuse purulent peritonitis was present, and several cysts which apparently arose from a section of the small intestine were found. Volvulus had occurred with resulting gangrene and perforation. Resection and end-to-end anastomosis were performed, and complete recovery took place. Subsequent examination showed that the cysts contained chyle and arose from the mesentery, from which they had grown into the ileum between the serous and muscular coats. Poulsen could find no similar case in the literature. J. D. Rolleston.

A case of splenectomy (*'Liverpool Med. Chir. Journ.,'* 1912, XXVII, *p.* 389).—**R. E. Kelly.**—A boy, aged 9 years, was run over by a motor-car. On admission to hospital he looked ill and complained of abdominal pain, but there was no bruising about the abdomen. On laparotomy the pelvis was found to be filled with clotted blood. The spleen was extensively lacerated, the posterior inferior angle being entirely separated from the main portion. Recovery was uneventful, except for sepsis in the transfusion wound made in the thigh. J. D. Rolleston.

The administration of chloroform in children (*'Journ de Méd. de Paris,'* 1912, XXXII, *p.* 617).—**Savariaud** considers this anæsthetic is best administered drop by drop on a thick compress, careful attention being paid to the respiration and colour of the skin. A livid condition of the latter is nearly always due to blockage of the pharynx by the tongue, which should be drawn forward, and in serious cases artificial respiration and rhythmic traction of the tongue should be performed. The author has only seen one death in twenty years. F. R. B. Atkinson.

Reviews.

DISEASES OF CHILDREN. By B. K. RACHFORD, M.D., Professor of Diseases of Children, Ohio-Miami Medical College, University of Cincinnati, etc. New York and London: D. Appleton & Co., 1912. Pp. 737. Price 25s. net.

DR. RACHFORD'S book deserves to take a high place in the literature on children's diseases. It is a complete and systematic treatise, written by a man of wide experience, whose individuality is evident throughout its pages. The opening chapters, which are concerned with the general hygiene of infancy and childhood, growth and development, the examination of the sick child, and the therapeutics of infancy and childhood, are admirable, and contain much useful information. The rest of the book is devoted almost entirely to the medical disorders of childhood, but at the end are sections on diseases of the ear and diseases of the skin. The inclusion of the former, excellent though it is, is perhaps a little surprising, as the other surgical diseases of children are not dealt with or are only briefly mentioned; indeed, there would not be room for them in detail without making the volume unduly cumbersome.

Considerable attention has been paid to treatment, much of which is the outcome of the author's personal experience. Dr. Rachford strongly advocates the use of guaiacol in affections of the lung, the various forms of tuberculosis, and in cysto-pyelitis. The descriptions of the various diseases are of such a uniformly high standard as almost to defy criticism. We must, however, take exception to the statement that recurrent vomiting with acetonuria "is one of the most common diseases of early childhood," in spite of the fact that the author includes under this heading several clinical types, and associates recurrent coryza and migraine with this condition. In the account of retro-pharyngeal abscess there is no mention of caries of the cervical vertebræ as a cause, or of the appropriate treatment for an abscess arising in such a situation. Further, the chapter on leukæmia is somewhat misleading. The lymphatic variety is not so very uncommon in childhood as the author would lead one to suppose, while the myeloid form is, on the other hand, exceedingly rare. In speaking of night-terrors the writer states (p. 672) that "peripheral irritation plays a part in touching off the paroxysm"—an expression which sounds curious to English ears. It is interesting to note that he divides the subject into central or idiopathic and symptomatic or peripheral terrors, though he is not prepared to state that there is a fundamental difference between the two.

The book contains six coloured plates and numerous illustrations, many of which are taken from other sources; several charts and radiographs are also included. The printing is good and the get-up of the book is excellent. We can confidently recommend it to students and practitioners who are seeking an up-to-date and thoroughly reliable text-book on the subject.

T. R. W.

THE BABY: A MOTHER'S BOOK. By a MOTHER. London: T. C. & E. C. Jack. Pp. 94. Price 6d. net.

MARRIAGE AND MOTHERHOOD. By H. S. DAVIDSON, M.B. London: T. C. & E. C. Jack. Pp. 93. Price 6d. net.

BOTH these little works belong to the series called "The People's Books," and are written in simple and unpretentious language. The former con-

tains instructions regarding diet, clothing, exercise, and general hygienic advice concerning the way a child should be reared from its earliest years, and the latter book describes succinctly the hygiene of pregnancy, its signs, symptoms and complications, with a chapter on the newly born child similar to, but less detailed in its instructions, than in the former brochure. Both books can be heartily recommended, and are deserving of study by those who have, or are about to have, the care of a child. F. R. B. A.

Correspondence.

A CASE OF FATAL HÆMORRHAGE FROM THE THROAT.

To the Editor of The British Journal of Children's Diseases.

Dear Sir,—I was much interested to read a case of fatal hæmorrhage from the throat reported by Dr. J. D. Rolleston in the British Journal of Children's Diseases, 1913, x, p. 66, as I had a very similar case tale summer. I regret that I did not keep any notes of the case, but I can trust my memory fairly well.

The patient was a little boy, aged about 6 years. I received a message from a doctor that he had a case of urgent mastoid abscess, which he asked me to take into hospital at once for operation.

I examined the child on arrival, and found that he had no mastoid trouble, but a much enlarged tonsil on the left side, and free hæmorrhage from the left ear. He had a fairly high temperature. The blood coming from the ear was quite bright, and unmixed, as far as one could see, with pus.

I left him alone, but later, I think the next day, there was so much obstruction to respiration that I decided to try to relieve the condition by opening the enlarged tonsil. I pushed a sinus forceps a short distance into the tonsil in the usual way for quinsy, and though there was no evacuation of pus the condition was relieved.

The next day or two the child seemed much better, though more hæmorrhage occurred from the ear, and he still ran a high temperature.

About the third day a nurse was sitting by him, and the child talking and playing quite happily, when suddenly, without any warning, he gushed up a quantity of blood from his throat, and, according to the nurse's account, dropped back instantly dead. I could not do a post-mortem, so am unable to give the source of the hæmorrhage, but, from the great rapidity of death, concluded that it was carotid.

The strangest feature in the case was the hæmorrhage from the meatus beforehand. The condition was obviously a septic one from the start, but there was no history nor evidence of scarlet fever.

I am quite certain that I did not penetrate anywhere near the carotid when I pushed in the sinus forceps. I did this under a general anæsthetic with great care.

Hoping this case may be of interest to you,

I am,

Yours faithfully,

Walter B. Maurice.

Lloran House,
Marlborough;
March the 9th, 1913.